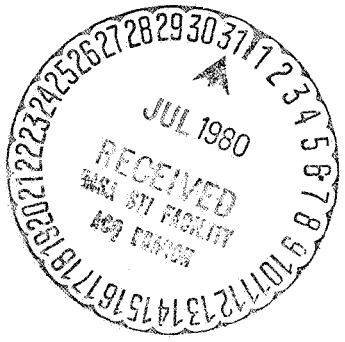
THE NIMBUS 5 DATA CATALOG

VOLUME 3

1 APRIL 1973 THROUGH 31 MAY 1973
DATA ORBITS 1486 THROUGH 2304



GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND

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Volume 3

1 April 1973 through 31 May 1973
Data Orbits 1486 through 2304

Prepared by

Allied Research Associates, Inc.
Baltimore, Maryland

For the

ERTS/Nimbus Project

December 1973

GODDARD SPACE FLIGHT CENTER
Greenbelt, Maryland

FOREWORD

This is the third volume of a series of catalogs published by the National Aeronautics and Space Administration to document data acquired from the Nimbus 5 Meteorological Satellite. This volume covers the period from 1 April 1973 through 31 May 1973 with subsequent catalogs to contain documentation for succeeding periods throughout the useful lifetime of Nimbus 5.

Background information concerning the Nimbus 5 Meteorological Satellite system and a description of the experiments and data formats have been published separately in The Nimbus 5 User's Guide, with post-launch User's Guide information changes and corrections included in the data catalogs. The Nimbus 5 catalogs present the type of data available, anomalies in the data, if any, and geographic location and time of the data.

The assembly and editing of this catalog was accomplished by Allied Research Associates, Inc. (ARA), Baltimore, Maryland, under contract number NAS 5-21617 with the Goddard Space Flight Center, NASA, Greenbelt, Maryland.

S. Weiland
Project Manager
ERTS/Nimbus Project
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SECTION 1

SUMMARY OF OPERATIONS

1.1 Introduction

Nimbus 5 was successfully launched from the Western Test Range at Vandenberg AFB, California, into a near circular orbit (1089 km × 1102 km) at 07 hr 56 min 00 sec GMT on 11 December 1972. All experiments and subsystems were successfully turned on. Satellite operations from launch (11 December) through orbit 103 (18 December) consisted of engineering evaluation of all spacecraft systems. Therefore, data reception, accountability, and processing were intermittent during that period. Volume 1 of this catalog reflects documentation from orbit 104 (19 December 1972) through orbit 693 (31 January 1973). Volume 2 covers from orbit 694 (1 February 1973) through orbit 1485 (31 March 1973). Volume 3 covers from orbit 1486 (1 April 1973) through orbit 2304 (31 May 1973).

The sensory data output and total operating time from launch through orbit 2304 were as follows:

ESMR		3548 hours	
ITPR		3547 hours	
NEMS		3551 hours	
SCR		3551 hours	
THIR		3553 hours	
SCMR:	direct	29 hours	(No useable SCMR data was
	recorded	6 hours	recorded after orbit 320.)

The spacecraft attitude in pitch was biased between + 2.6 and + 2.9 degrees throughout this catalog period (except for + 2.0° on orbit 1807). Table 1-1 shows when each pitch bias was used. A positive pitch angle of 2.6 degrees moves the principal point 50.0 km behind the subsatellite point while 2.9 degrees of pitch moves the principal point 55.6 km. When the spacecraft has a pitch bias applied, a scanner type instrument no longer scans the earth along a great circle arc, but scans along the small circle formed by the intersection of the scan plane with the earth. Since the plane of the small circle is tilted with respect to the nominal scan plane, points on the arc are displaced farther from the great circle as the scan angle increases. Thus, although the instrument records in lines normal to the orbit plane (in the absence of yaw), the displacement is not uniform across the scan line.

The nadir location coordinates on ESMR, ITPR, SCR and NEMS tapes are adjusted to correct for the pitch bias. Grid points on THIR and ESMR images are routinely corrected to match the data points and the grids. Any grid that is still in error by more than 60 n.m. is identified in Table 2-2 under column headed by "Grid Correction." THIR and ESMR grid print maps, available through NSSDC, are also adjusted so that the data points and their coordinates match.

Table 1-1

Nimbus 5 Pitch Bias History
from Orbit 583 (23 January 1973)
through Orbit 2304 (31 May 1973)

Pitch Bias / Date (1973)	+2.9°	+2.6°	+2.0°
1/23 - 4/24	583 - 1806		
4/24			1807
4/24 - 4/26		1808 - 1823	
4/26 - 5/9	1824 - 2002		
5/9		2003 - 2005	
5/9 - 5/12	2006 - 2047		
5/12 - 5/13		2048 - 2050	
5/13 - 5/17	2051 - 2105		
5/17		2106 - 2109	
5/17 - 5/20	2110 - 2153		
5/20		2154 - 2157	
5/20 - 5/23	2158 - 2191		
5/23		2192 - 2195	
5/23 - 5/26	2196 - 2232		
5/26		2233 - 2235	
5/26 - 5/28	2236 - 2255		
5/28		2256 - 2259	
5/28 - 5/30	2260 - 2279		
5/30		2280 - 2289	
5/30 - 5/31	2290 - 2304		

Roll and yaw attitude control have been within nominal limits for this period.

Subsection 1.2 through 1.7 of this catalog summarize the operational highlights of the individual experiments and call attention to known data anomilies. Section 2 lists the time for which data was received and is available for study for each experiment. Sections 3 and 4 show ESMR and THIR imagery, while Section 5 presents corrections to The Nimbus 5 User's Guide.

The user is referred to The Nimbus 5 User's Guide for a complete description of each experiment and to Section 1.7 of that Guide for the requesting procedure and sources for all data. Sections 2, 3, and 4 of this Data Catalog should help the user to select data to meet his needs.

1.2 The Temperature Humidity Infrared Radiometer (THIR) Subsystem

The quality of the THIR data from both channels (11.5 μm and 6.7 μm) has been excellent. Root mean square (rms) THIR temperature variations, due to flutter in the HDRSS tape recorders and to normal noise components, appear to be less than 2°K. Figure 1-1 is a THIR 11.5 μm channel image for this period.

All processed THIR film is archived and available through the National Space Science Data Center (NSSDC), as is all available THIR digital data. The THIR digital products are processed to final format only on request. Sections 1.7 and 2.4 of The Nimbus 5 User's Guide discuss the formats and procedures to order these products.

1.3 The Surface Composition Mapping Radiometer (SCMR) Experiment

The SCMR experiment collected and returned approximately 35 hours of instrument data during the first 320 orbits. Intermittent loss of a scan mirror synchronization pulse caused a loss of useful data output whenever this occurred. This synchronization problem progressed to the point where no useable data could be obtained after orbit 320 (4 January 1973).

Users who desire SCMR data or information should write to Dr. Warren G. Hovis, Code 652, Goddard Space Flight Center, Greenbelt, Maryland 20771.

1.4 The Electrically Scanning Microwave Radiometer (ESMR) Experiment

During most of this catalog period the instrument continued to operate in the reduced response mode which first occurred on orbit 1062 (28 February). (Section 1.4.1 of Volume 2 discusses the effects of the malfunction on the data.) On orbit 2250 (27 May) the instrument recovered and returned to its normal operating mode and responded to its full range of brightness temperatures. The displays in Section 3 for the period 28-31 May illustrate the recovery of the data in the swath 3 temperature range.

1.5 The Infrared Temperature Profile Radiometer (ITPR) Experiment*

The ITPR continued to perform normally, except during scanning modes of operation. The data quality was excellent with no large gaps in the orbits processed. Because of scan mode problems, the ITPR was in the nadir position during most of this period.

Beginning at orbit 1562 (6 April), errors were consistently observed in all grids during the scanning mode of operation. The scan mirror was disabled during orbit 1600 (9 April) when the scanning became erratic. Thereafter, whenever the mirror was turned on for evaluation, the mirror stepping errors persisted. The last scanning mode orbit for this period was 2083 (15 May).

*Contributed by H. B. Howell, Meteorological Satellite Laboratory/NOAA.

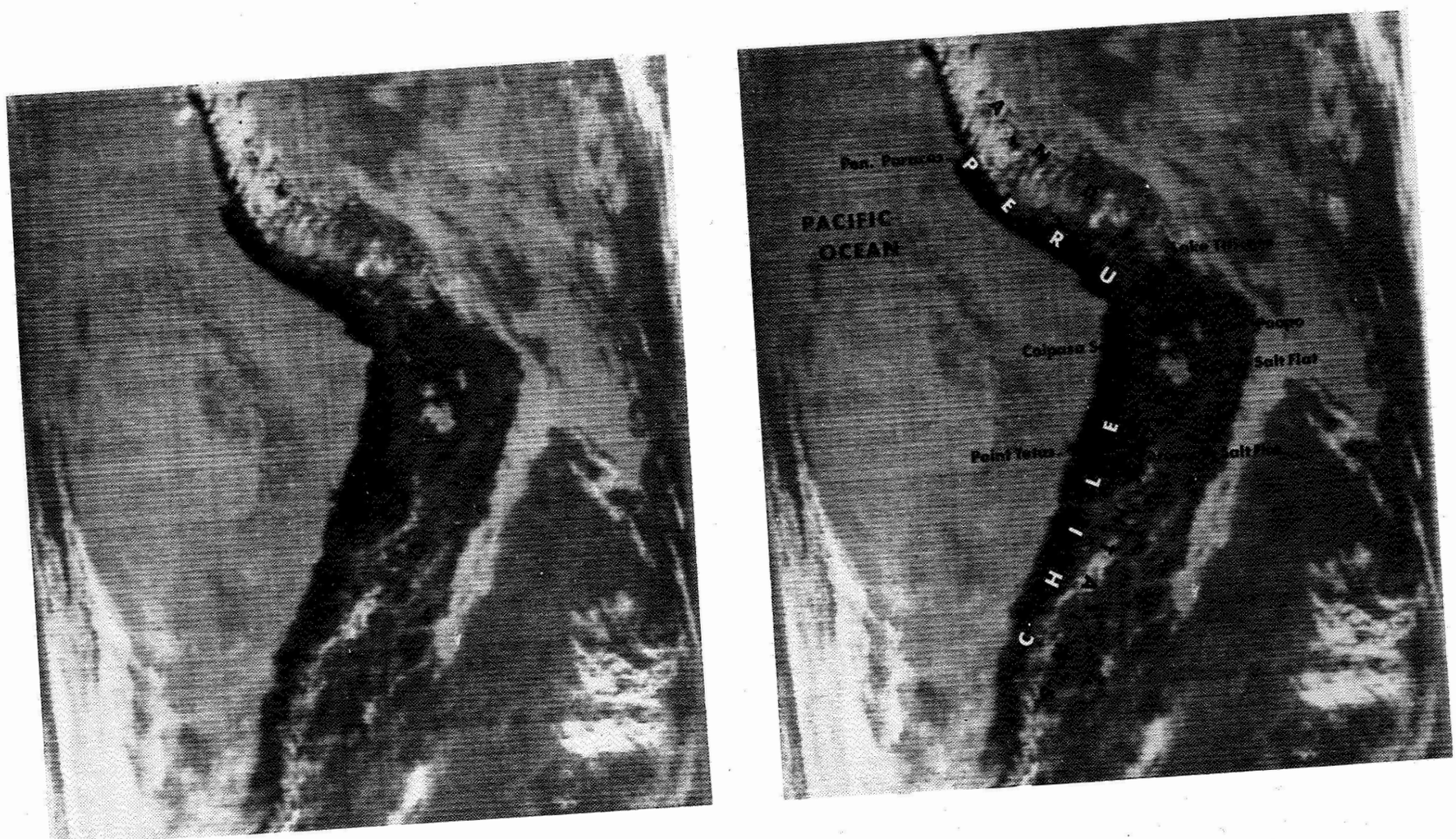


Figure 1-1. Nimbus 5 Daytime THIR (11.5 μm channel) Image Recorded over Chile and Peru, South America on 13 May 1973.

The instrument was in the scan mode, usually from 60°N to 60°S on the day and night portion of each orbit, during the following orbits: 1506-1512, 1519-1525, 1533-1539, 1546-1552, 1562-1566, 1600, 1697-1700, 1785-1793, 1897-1900, 1910-1912, 1924, 2080-2083.

1.6 The Selective Chopper Radiometer (SCR) Experiment*

1.6.1 Results of SCR Measurements of the Stratosphere during April and May 1973

The April-May period included the time of transition from winter to summer conditions in the Northern Hemisphere, while the Southern Hemispheric winter conditions, already well established in the stratosphere by the end of March, became more intense.

1.6.1.1 Dates of Reversal of the Meridional Temperature Gradient

Table 1-2 gives the dates of zero temperature difference pole-to-pole and pole-to-equator during the spring of 1973 and for the reverse transition six months later. Columns SE give dates when the zonally averaged radiance measured in the band 75-85°S equalled that in the band 5°S-5°N. Similarly, columns NE give dates of equal radiance in bands 75-85°N and 5°S-5°N, while columns NS give dates of equal radiance in bands 75-85°S and 75-85°N. The date was well marked in each case, with no tendency for temperature differences to reverse sign more than once. The dates of equal temperatures near both poles (columns NS) were very similar at each level for the period near the March equinox, with the day of symmetry varying from 29 March to 31 March, 8-10 days after the equinox. However, the length of time when both poles were colder than the equator (the difference between dates in columns SE and NE) varied from 56 days at channel B12 levels and 63 days at channel B23 levels to 30 days at channel A1 levels**. Results for the September equinox are given for comparison and show quite a different pattern. Polar temperatures were equal much earlier relative to the equinox, e.g. 24 days before the equinox at channel B12 levels, while the equator was hotter than both poles for shorter periods — just one day at channel B12 levels.

Table 1-3 gives corresponding results for the Nimbus 4 SCR which has weighting functions peaking near 2, 15, 50 and 82 mb (43, 28, 21 and 17 km) for channels A, B, C and D respectively. The channel A and B results appear very similar to those of Nimbus 5 B12, B23 and B34 (which refer to a similar height range) for the period near the March equinox. Thus, the differences between years for the same equinox appear rather less than differences between the equinoxes for the same year, although more study of the September equinox would be necessary before conclusions can be drawn.

*Contributed by J. J. Barnett, Oxford University, Oxford, England.

**Figure 5-1 in Section 5 gives the approximate height for each of these levels.

Table 1-2

The 1973 Dates of Zero Temperature Differences Pole-to-Pole and Pole-to-Equator Derived from Nimbus 5 SCR Data

SE: 85° - 75°S and 5°S - 5°N
NE: 85° - 75°N and 5°S - 5°N
NS: 85° - 75°N and 85° - 75°S
(See section 1.6.1.1 for further explanation.)

Channel	SE	NS	NE	NE	NS	SE
B12	25 Feb	31 Mar	22 Apr	30 Aug	30 Aug	31 Aug
B23	28 Feb	31 Mar	2 May	29 Aug	7 Sept	14 Sept
B34	5 Mar	30 Mar	2 May	5 Sept	15 Sept	-
A1	13 Mar	29 Mar	12 Apr	20 Sept	6 Oct	-

Table 1-3

The 1971 and 1972 Dates of Zero Temperature Difference Pole-to-Pole and Pole-to-Equator Derived from Nimbus 4 SCR Data
(SE, NE and NS are as in Table 1-2.)

	1971			1972		
Channel	SE	NS	NE	SE	NS	NE
A	15 Feb	21 Mar	1 May	22 Feb	29 Mar	5 May
B	21 Feb	25 Mar	6 May	6 Mar	21 Mar	*
C	25 Mar	21 Mar	17 Mar	28 Mar	21 Mar	12 Feb
D	19 Apr	21 Mar	27 Feb	*	21 Mar	12 Feb

*Later than 18 April 1972 when an instrumental failure rendered channels C and D noisy and B difficult to interpret.

1.6.1.2 Stratospheric Wave Activity during April and May

The warm region at about 40°E 45°N on 31 March 1973 at channel B23 levels (see Figure 1-5 in Volume 2 of this catalog series) moved eastward reaching 90°E 45°N on 4 April. It then started to drift westward making a complete circuit of the globe in the next month, reaching 110°W 50°N on 20 April, 140°E 55°N on 2 May and 30°E 60°N on 6 May. During this time the wave amplitude decayed to a few degrees, while wave number two was dominant for a few days near 21 April. Small asymmetries were apparent after 6 May, although they could not be related directly to the earlier wave pattern.

The Southern Hemisphere pole area gradually cooled during April, and wave activity intensified, with variation between dominance of wave number one and two. Figures 1-2 through 1-13 give results for 21 May when wave activity was probably greater than at most other times during April and May. The charts in Figures 1-2 through 1-10 are polar stereographic centered on the South Pole, with the equator on the circumference. Equivalent black body temperatures (°K) are contoured every 5°K. The charts show a pronounced wave number two pattern at all levels with a tendency

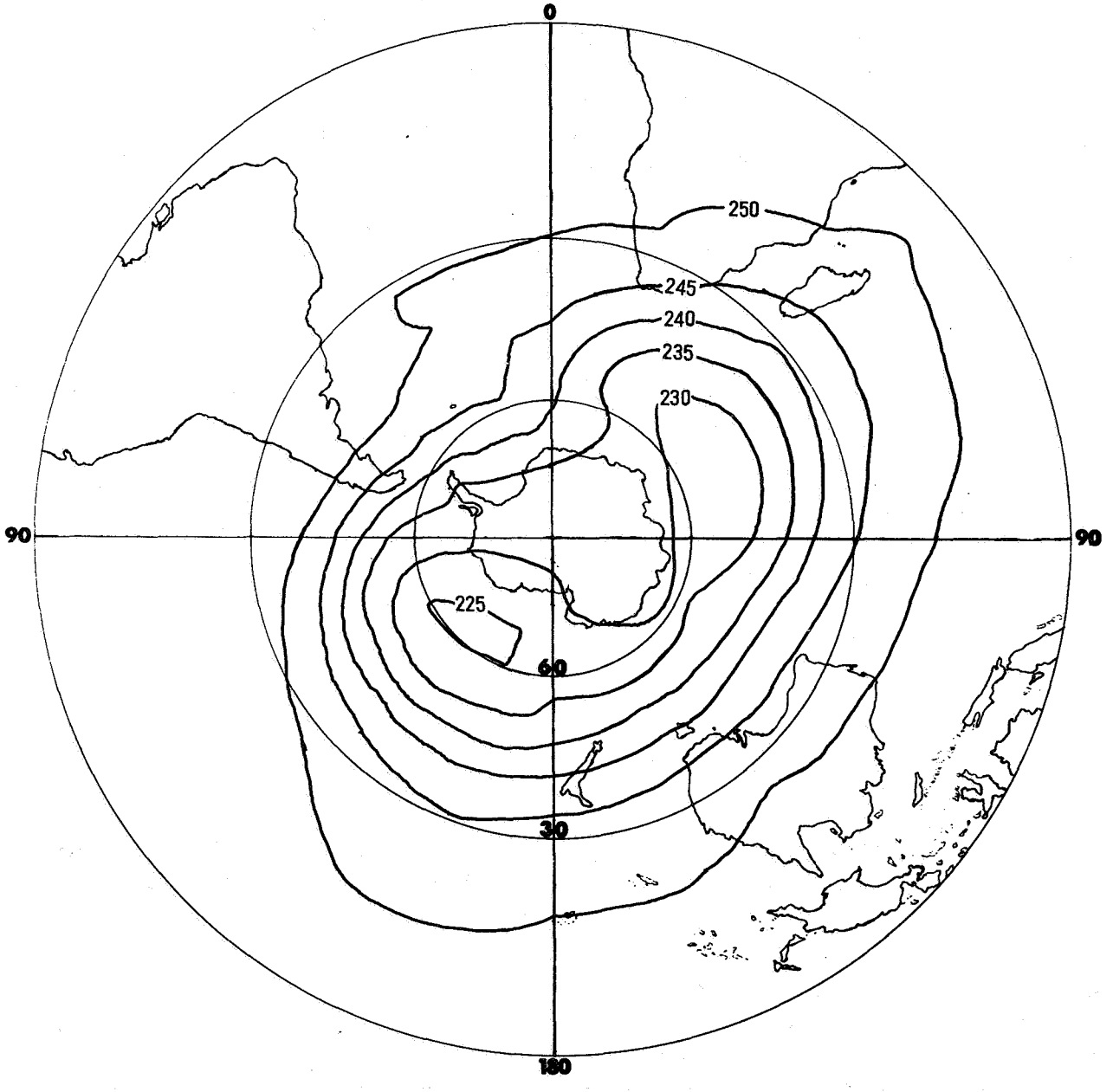


Figure 1-2. Southern Hemisphere Temperature Field for 21 May 1973 Derived from SCR Channel B12 Data. Equivalent black body temperatures (°K) are contoured every 5°K.

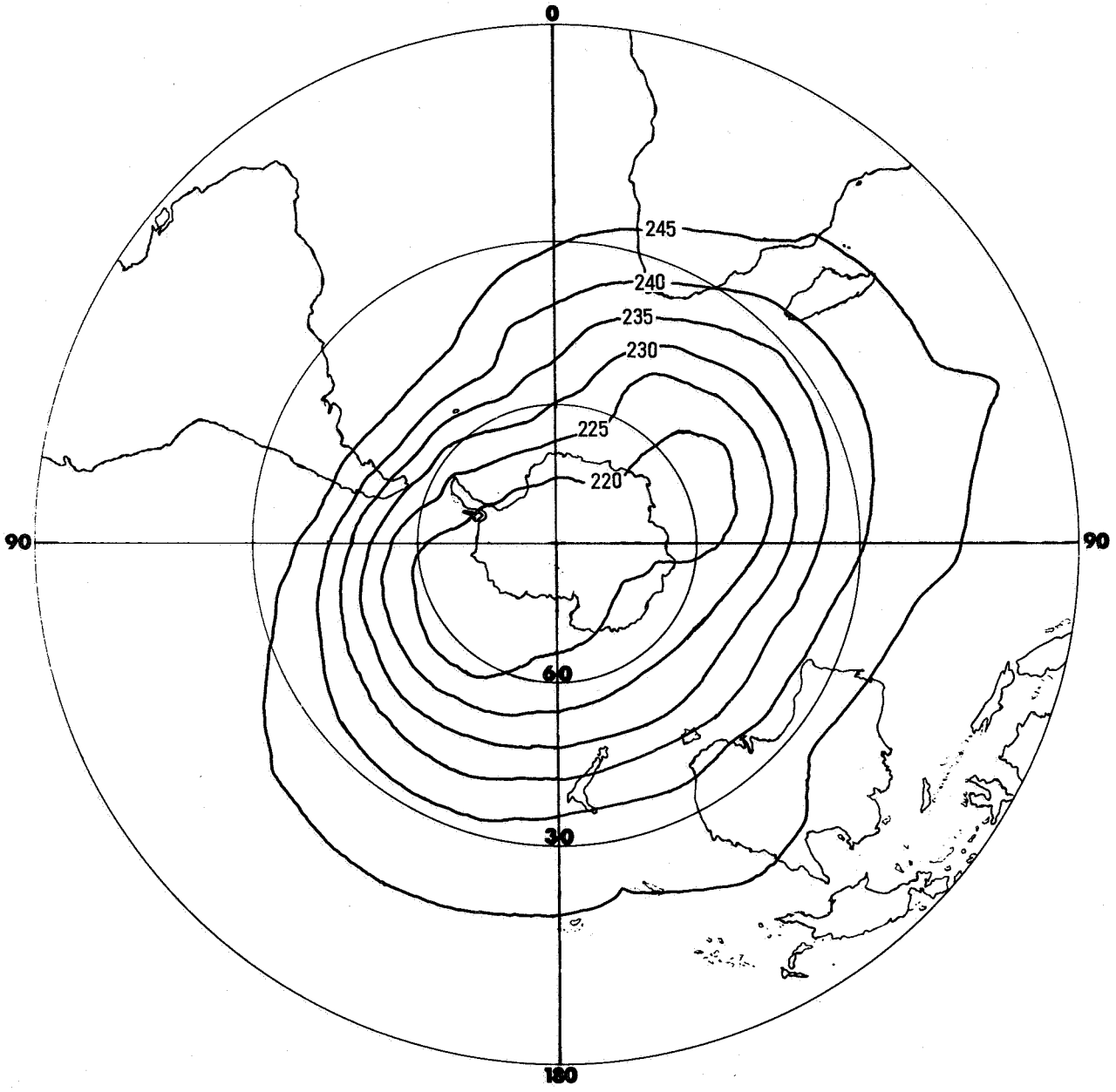


Figure 1-3. Southern Hemisphere Temperature Field for 21 May 1973 Derived from SCR Channel B23 Data. Equivalent black body temperatures (°K) are contoured every 5°K.

towards wave number one near the pole. The lines of minimum temperature (troughs) for each level are given in Figure 1-10. In the stratosphere (channels B12, B23, and B34) these lines tended to spiral out from the pole in a counter-clockwise sense, particularly on the branch near the 150°W meridian, being of the order of one degree further west per degree of latitude toward the equator. Poleward of 45°S the wave axis was rotated further west at increasing heights, the tilt being approximately 2.1° longitude/km between channels B4 and B12 levels. These variations of longitudinal phase with height

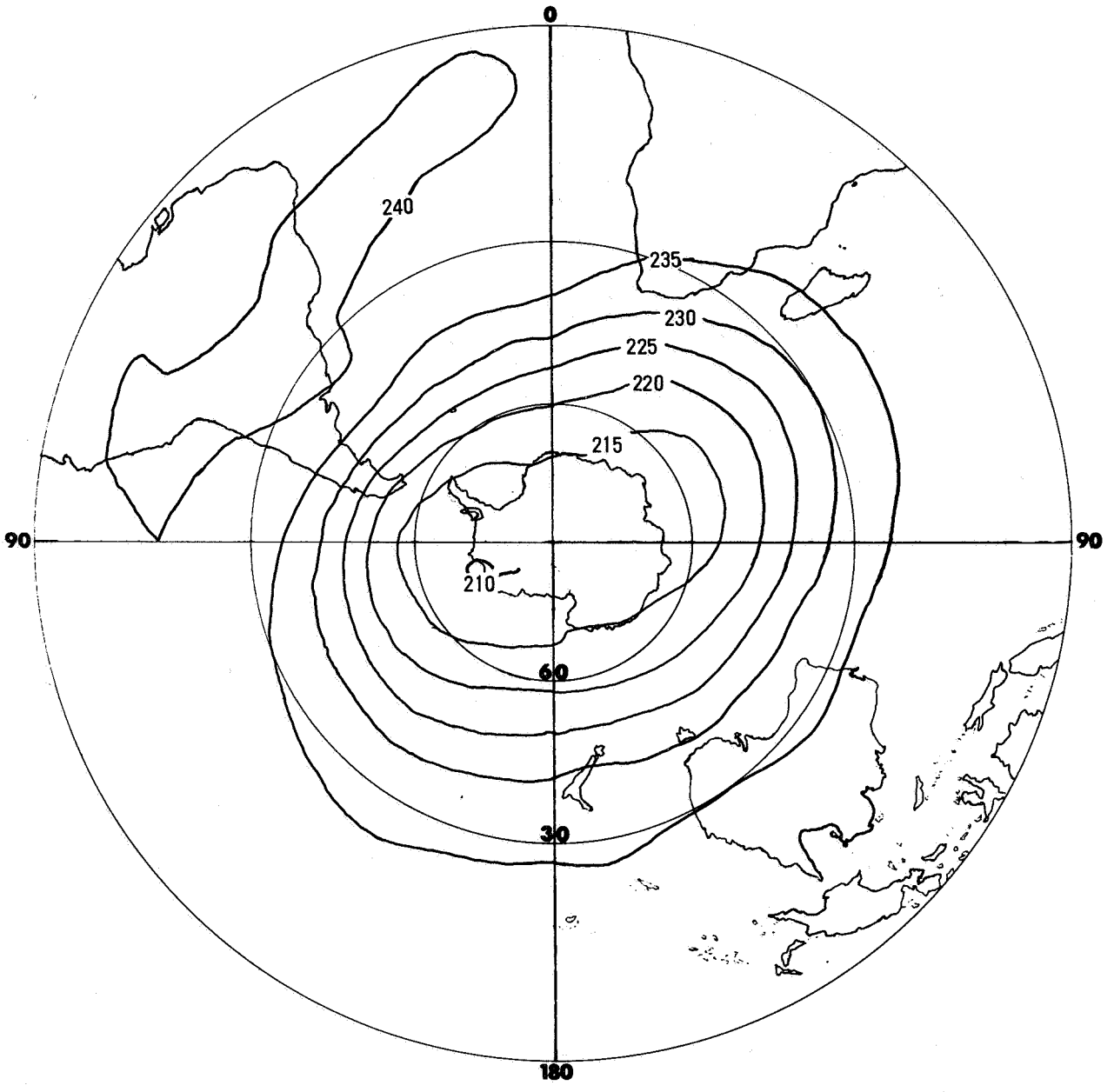


Figure 1-4. Southern Hemisphere Temperature Field for 21 May 1973 Derived from SCR Channel B34 Data. Equivalent black body temperatures (°K) are contoured every 5°K.

and latitude give very direct information about the directions of eddy energy, heat, and momentum transports. The westward tilt probably implies upward eddy energy and poleward eddy heat fluxes, while a latitudinal variation, in the sense found here, probably implies poleward eddy momentum and equatorward eddy energy fluxes (see Dickinson, 1968 and Barnett, 1973).

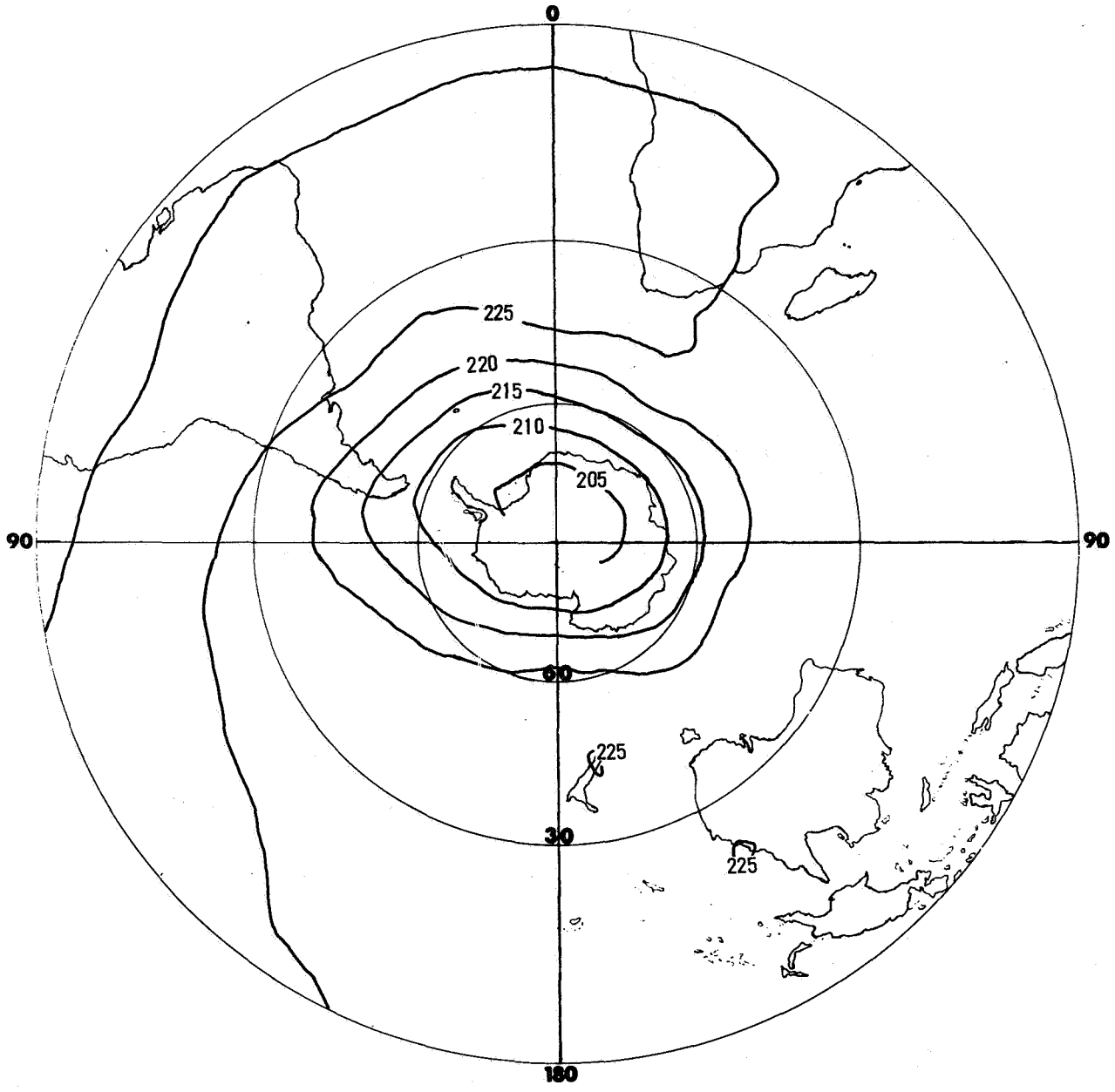


Figure 1-5. Southern Hemisphere Temperature Field for 21 May 1973 Derived from SCR Channel B4 Data. Equivalent black body temperatures (°K) are contoured every 5°K.

Figures 1-11, 1-12, and 1-13 give results of a temperature retrieval of data for 21 May. The retrieval used a maximum probability estimator assuming Gaussian statistics and linearized about climatological mean reference atmospheres (which varied with latitude) for May and June, supplied by D. S. Crosby. In this form, the retrieval operation consisted of matrix substraction, multiplication, and then addition. The satellite radiance measurements were first interpolated on to a rectangular grid

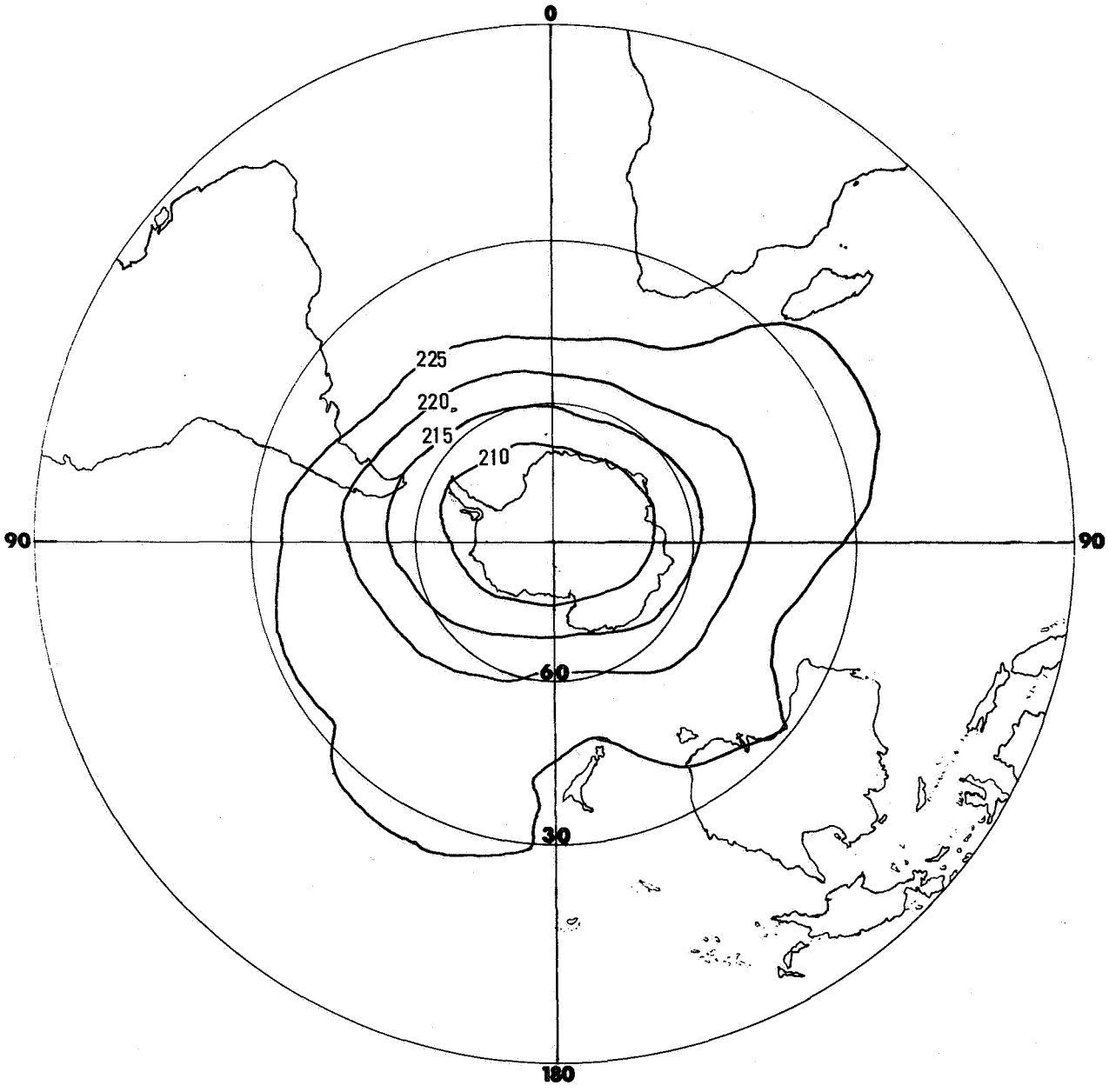


Figure 1-6. Southern Hemisphere Temperature Field for 21 May 1973 Derived from SCR Channel A1 Data. Equivalent black body temperatures (°K) are contoured every 5°K.

(4° in latitude, 10° in longitude), then small gaps (due mainly to blind orbits*) were filled by zonal linear interpolation. The temperature profile at each grid point was then derived. Clear column radiances were used for all channels, those for A2, A3, A4 and C4 being derived by linear interpolation along orbits across cloudy areas. This method

*Blind orbits occur whenever the HDRSS tape recorders are filled to capacity before the satellite passes over an acquisition station.

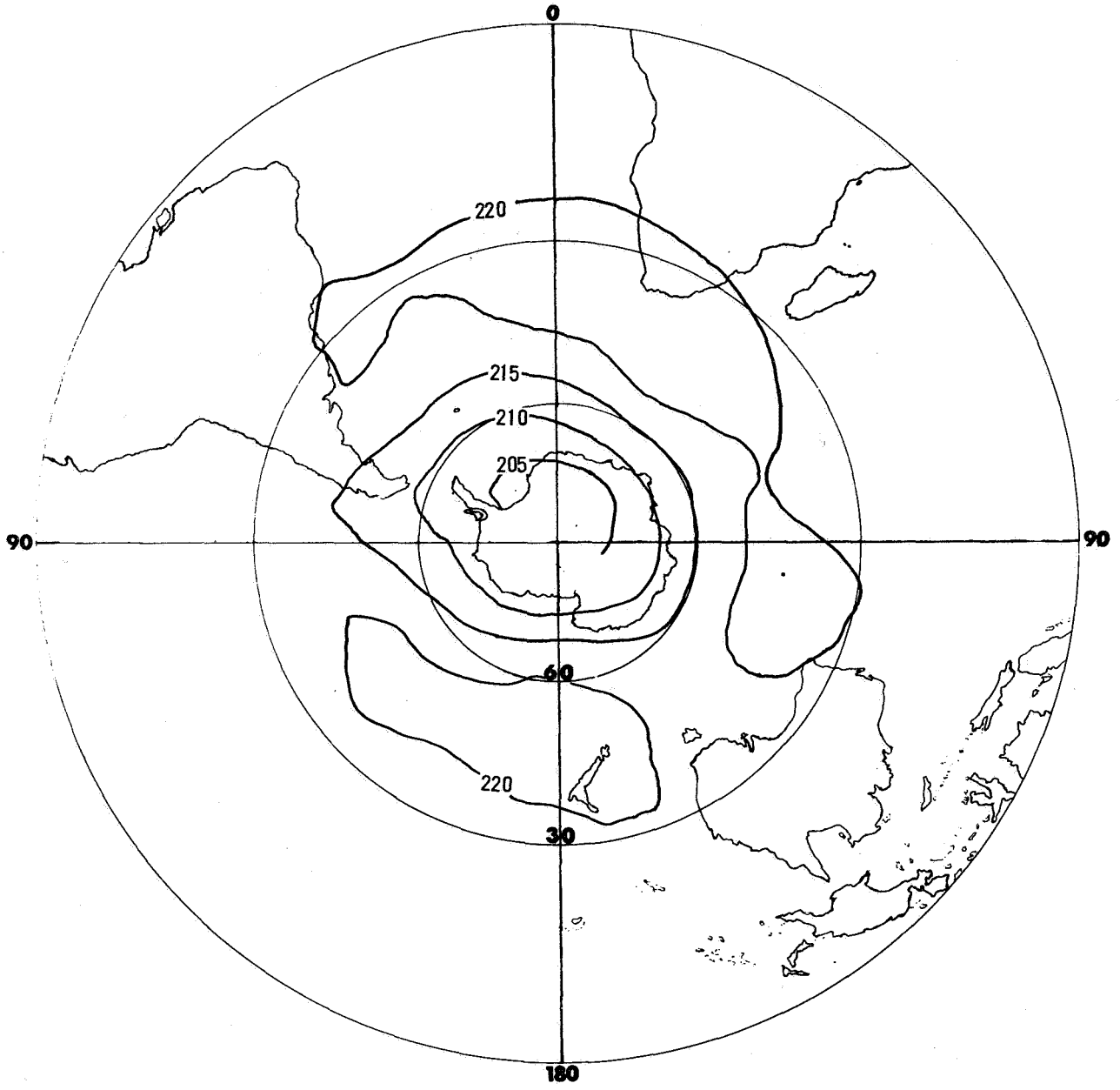


Figure 1-7. Southern Hemisphere Temperature Field for 21 May 1973 Derived from SCR Channel A2 Data. Equivalent black body temperatures (°K) are contoured every 5°K.

is believed to be adequate for the purpose since the stratospheric results are of greatest interest. Other channels used in the retrieval were B12, B23, B34 and A1. Figure 1-11 gives temperature averaged around latitude circles and shows the typical Northern Hemisphere early summer and Southern Hemisphere early winter. Figure 1-12 gives the standard deviation (rms) of temperature around latitude circles, and shows the Southern Hemisphere wave activity peaking near 52°S (12°K) with little activity in the Northern Hemisphere (1°K-2°K). Figure 1-13 gives a section of standard deviation of

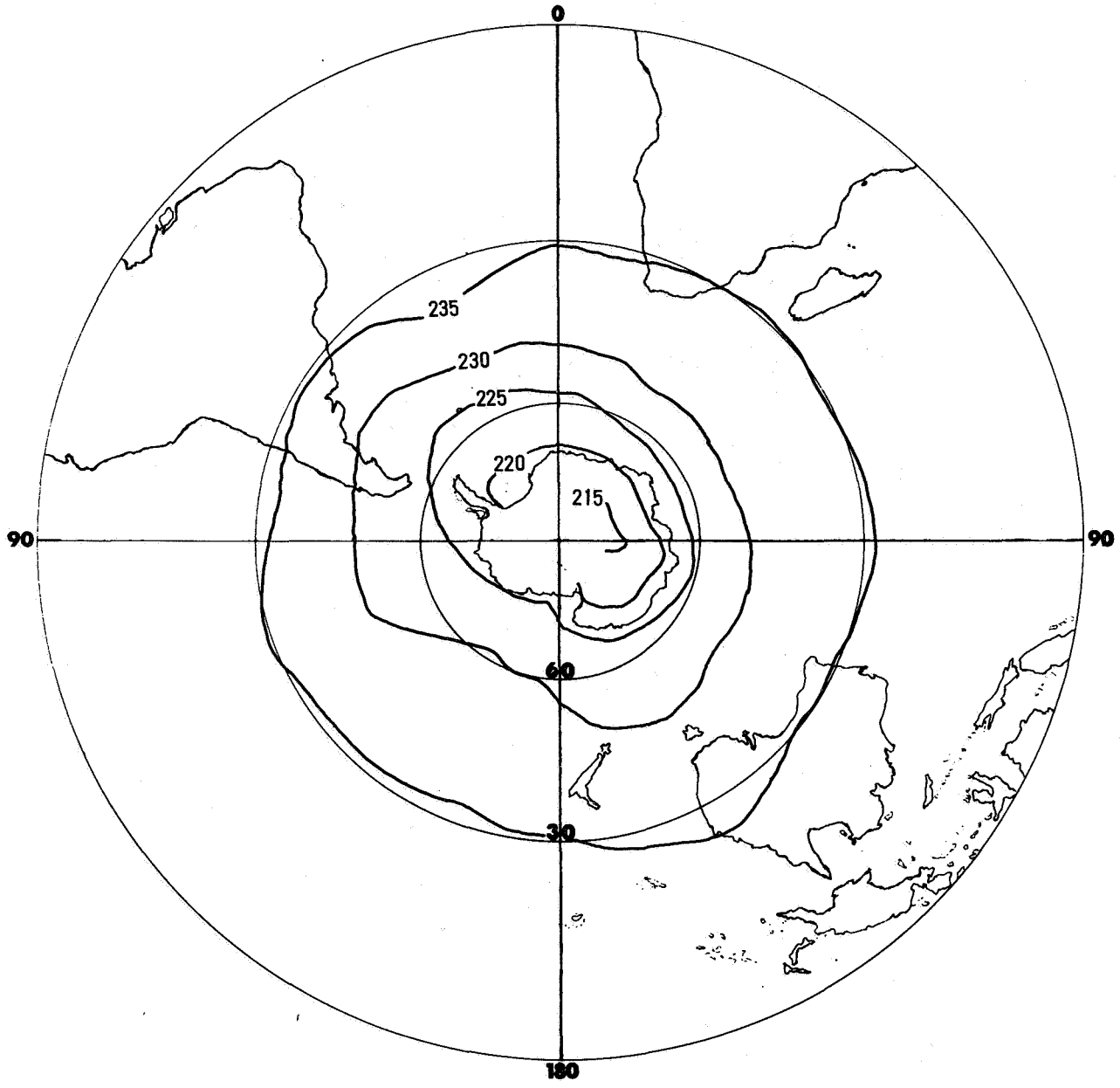


Figure 1-8. Southern Hemisphere Temperature Field for 21 May 1973 Derived from SCR Channel A3 Data. Equivalent black body temperatures (°K) are contoured every 5°K.

geopotential height relative to 1000 mb (i.e. it is a section of standard deviation of 1000 mb to z thickness where z is the ordinate). Errors in the tropospheric retrieval have a relatively minor effect on standard deviations of height for higher levels because of the rapid increase in temperature standard deviation with increasing height in the stratosphere.

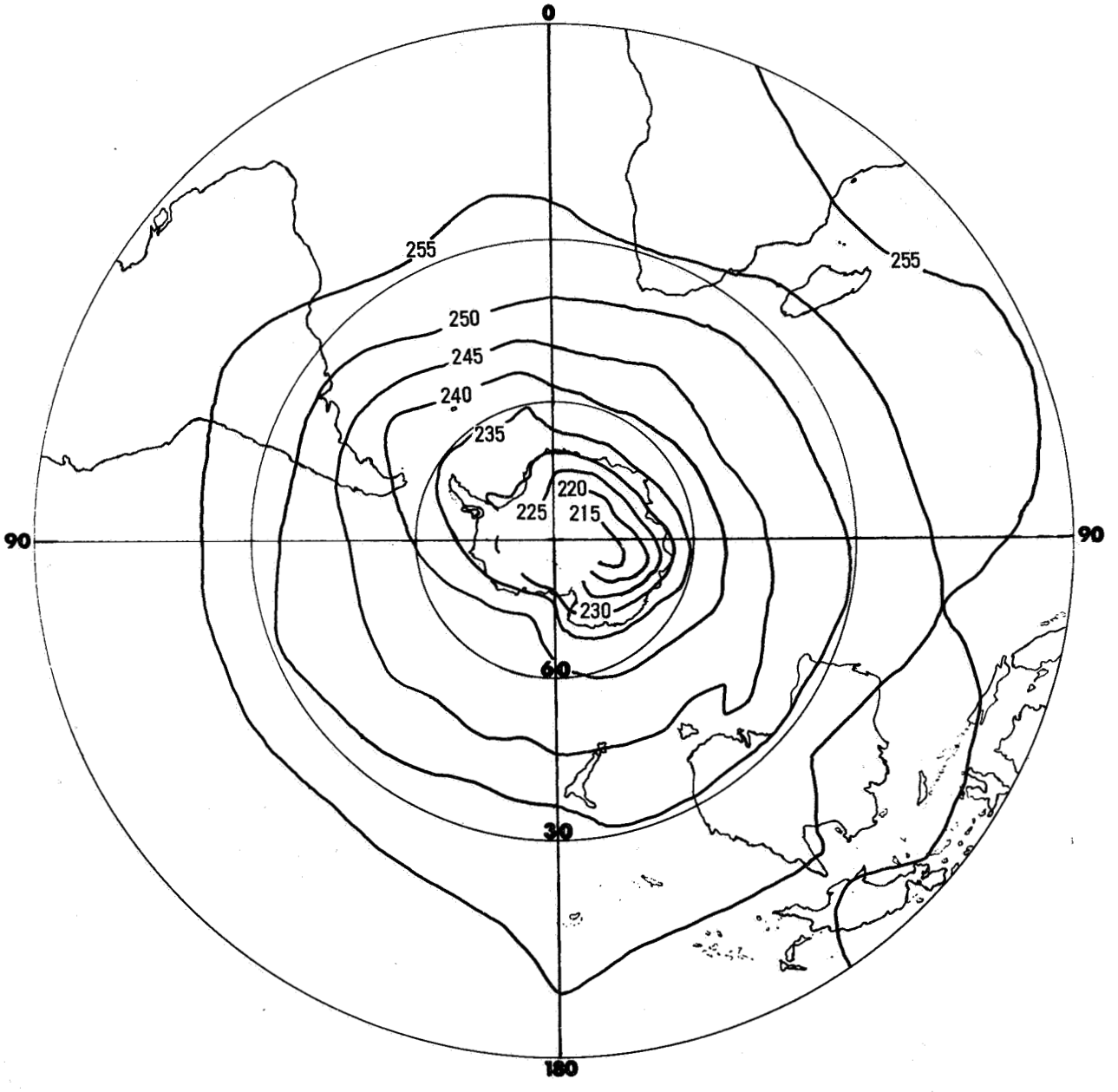


Figure 1-9. Southern Hemisphere Temperature Field for 21 May 1973 Derived from SCR Channel A4 Data. Equivalent black body temperatures (°K) are contoured every 5°K.

1.6.1.3 References

Barnett, J. J., Cross, M. J., Harwood, R. S., Houghton, J. T., Morgan, C. G., Peckham, G. E., Rodgers, C. D., Smith, S. D. & Williamson, E. J. (1972). The first year of the selective chopper radiometer on Nimbus 4. Quart. J. R. Met. Soc. 98, pp. 17-37.

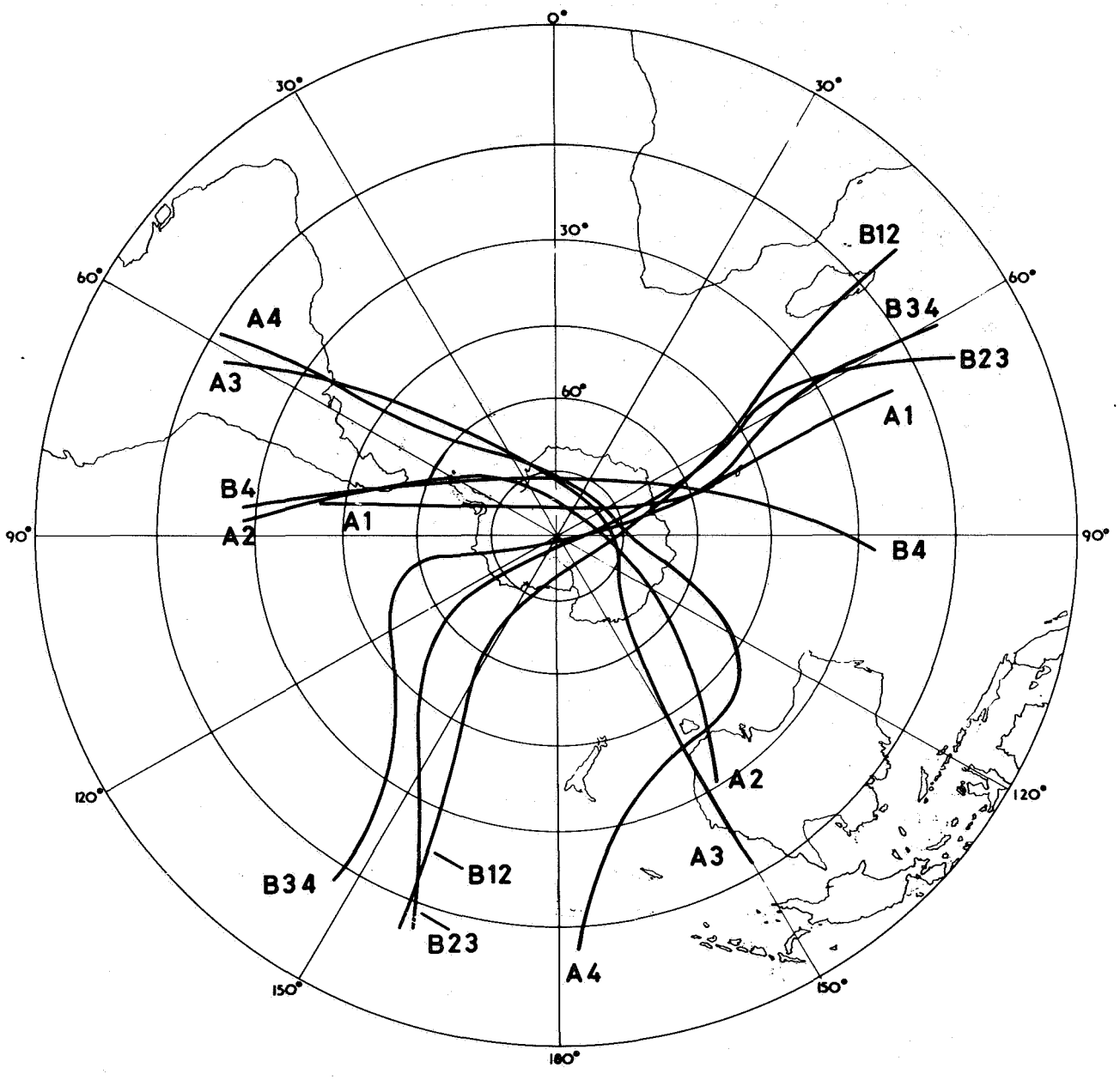


Figure 1-10. Southern Hemisphere Chart of the Lines of Temperature Minima for each channel of Figures 1-2 through 1-9.

Barnett, J. J. (1973). Analysis of stratospheric measurements by the Nimbus IV and V selective chopper radiometers. Presented at the International Symposium on Meteorological Satellites, Paris, May 1973, and to be published in proceedings.

Dickinson, R. E. (1968). Planetary Rossby waves propagating vertically through weak westerly wind wave guides. J. Atmos. Sci. 25, pp 984-1002.

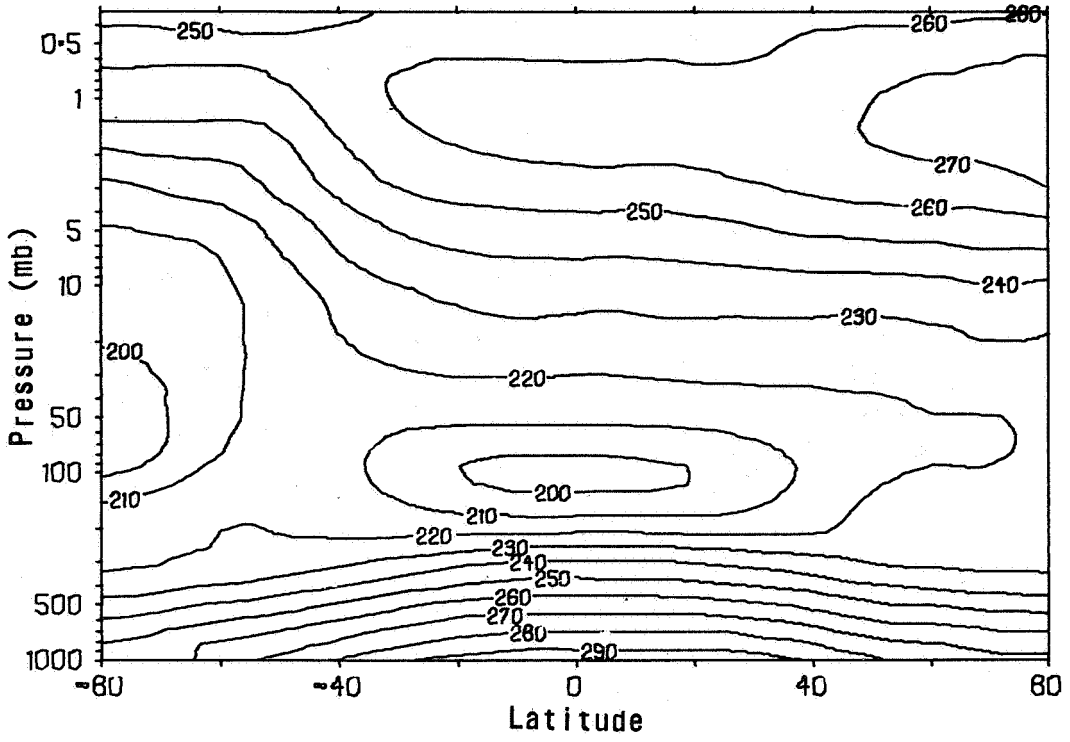


Figure 1-11. Zonal Mean Temperatures for 21 May 1973 Derived from SCR Data. Temperatures (°K) are averaged around latitude circles.

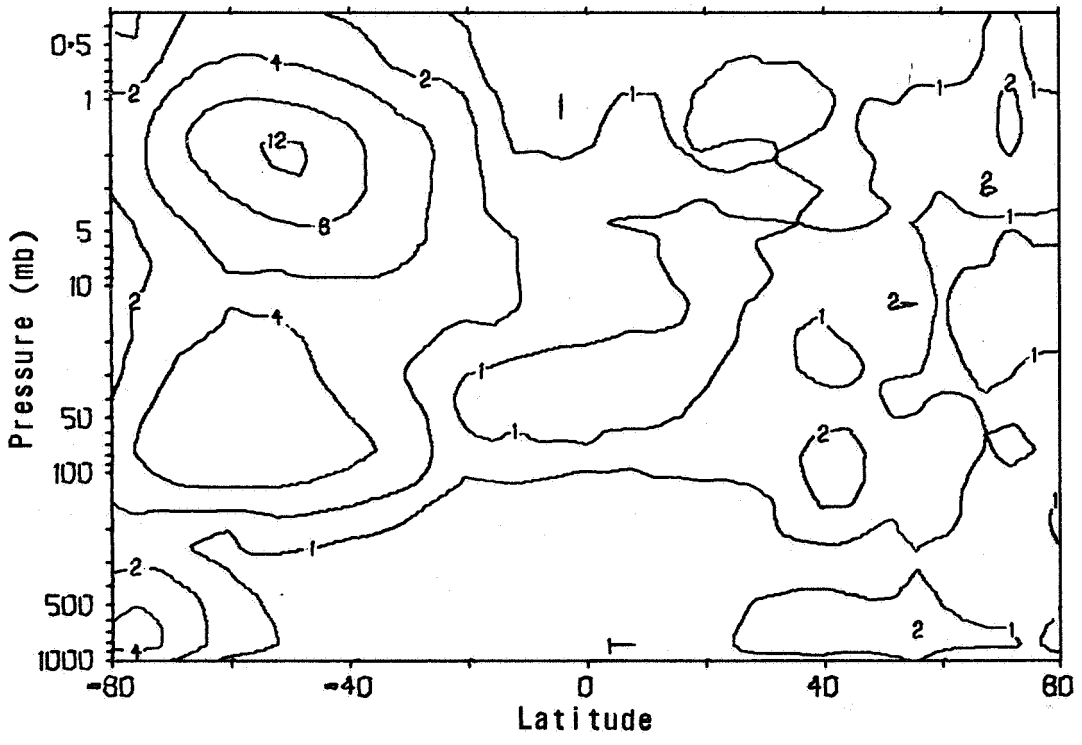


Figure 1-12. Standard Deviation of Temperature from the Zonal Mean for 21 May 1973 Derived from SCR Data. Temperatures are in degrees Kelvin

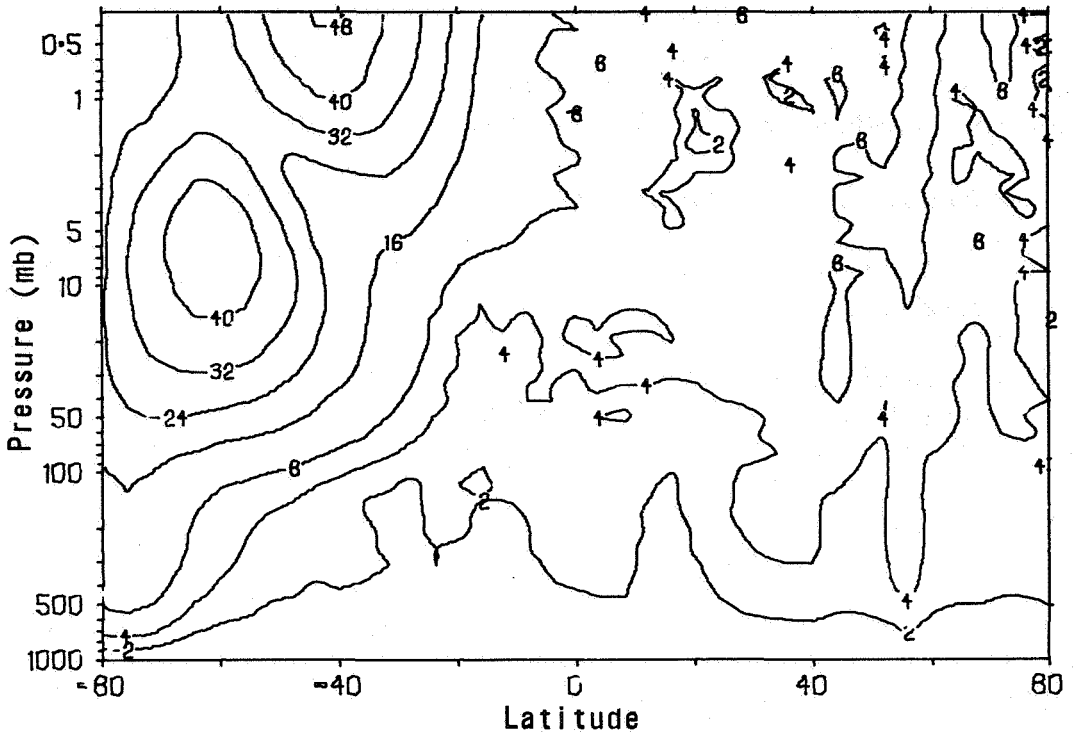


Figure 1-13. Standard Deviation from the Zonal Mean of the Geopotential Height (dekameters) Relative to 1000 mb.

1.6.2 Operational Analysis Procedure

As was done for the Nimbus 4 SCR, all data received for the instrument are analyzed. They normally amount to about 4600 major frames per day, with an additional 15 percent being lost because of blind orbits, transmission errors, etc. The processing procedure is divided into two parts:

(a) Oxford receives data from Goddard Space Flight Center, makes preliminary calibrations and extracts calibration parameters. These operations take place between 0800 and 1030 G. M. T. on the day following the observations. National Meteorological Center (NMC) height analyses and THIR data are also received at this time.

(b) About twenty days after (a), gridding, retrieval, fourier analysis around latitude circles, computation of zonal averages, plotting and stacking of these results, storage of calibrated results for each frame, production of a tape for Heriot-Watt University, England, and production of a tape of gridded radiances for K. Labitzke at Berlin Free University, with whom data is exchanged, take place. The (b) operations take place twenty days after (a), to allow sufficient time to derive the most appropriate calibration parameters.

Both (a) and (b) operation batches of data for one complete day which runs from approximately 0000 to 2400 G. M. T. The early Nimbus 5 data are also being reprocessed (operation b) with more appropriate calibration, leak correction, and B difference parameters than were available when the data was first processed.

1.7 The Nimbus E Microwave Spectrometer (NEMS) Experiment*

The NEMS instrument operated well during this catalog period and the data continued to be excellent.

One presentation form of the processed data is the NEMS Parameter Graph shown in Figures 1-14, 1-15, and 1-16. Each graph shows the five parameters sampled on one orbit; the three atmospheric layers, the integrated abundance of atmospheric water vapor, and liquid water (in g/cm^2). The thickness scales on the left of each figure refer to layers 1 and 2, while those on the right refer to layer 3. The thickness estimates over Antarctica and certain other high mountains are not valid, and small errors sometimes occur over the Inter-Tropical Convergence Zone where narrow deviations in layer 1 indicate the presence of intense clouds. The interrupted straight band of L's marks where the radiometer indicates there may be land. Although the liquid water and water vapor estimates are generated for both land and sea, only those over ocean are valid. The longitude scale refers to longitude east.

Contour maps, assembled from one or more days of data, are another form of data presentation. Three contour maps (Figures 1-17, 1-18, and 1-19) represent layer thicknesses of the 1000-500 mb, 500-250 mb, and 250-50 mb layers for the northern hemisphere on GMT day 63 (4 March 1973). The latitude rings are equally spaced and range from 10°S to the North Pole. The stars on the equator represent the ascending nodes of the orbits incorporated in the map. Three contour maps for the southern hemisphere for the same day are also presented (Figures 1-20, 1-21, and 1-22).

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*Contributed by David H. Staelin, MIT, Cambridge, Mass.

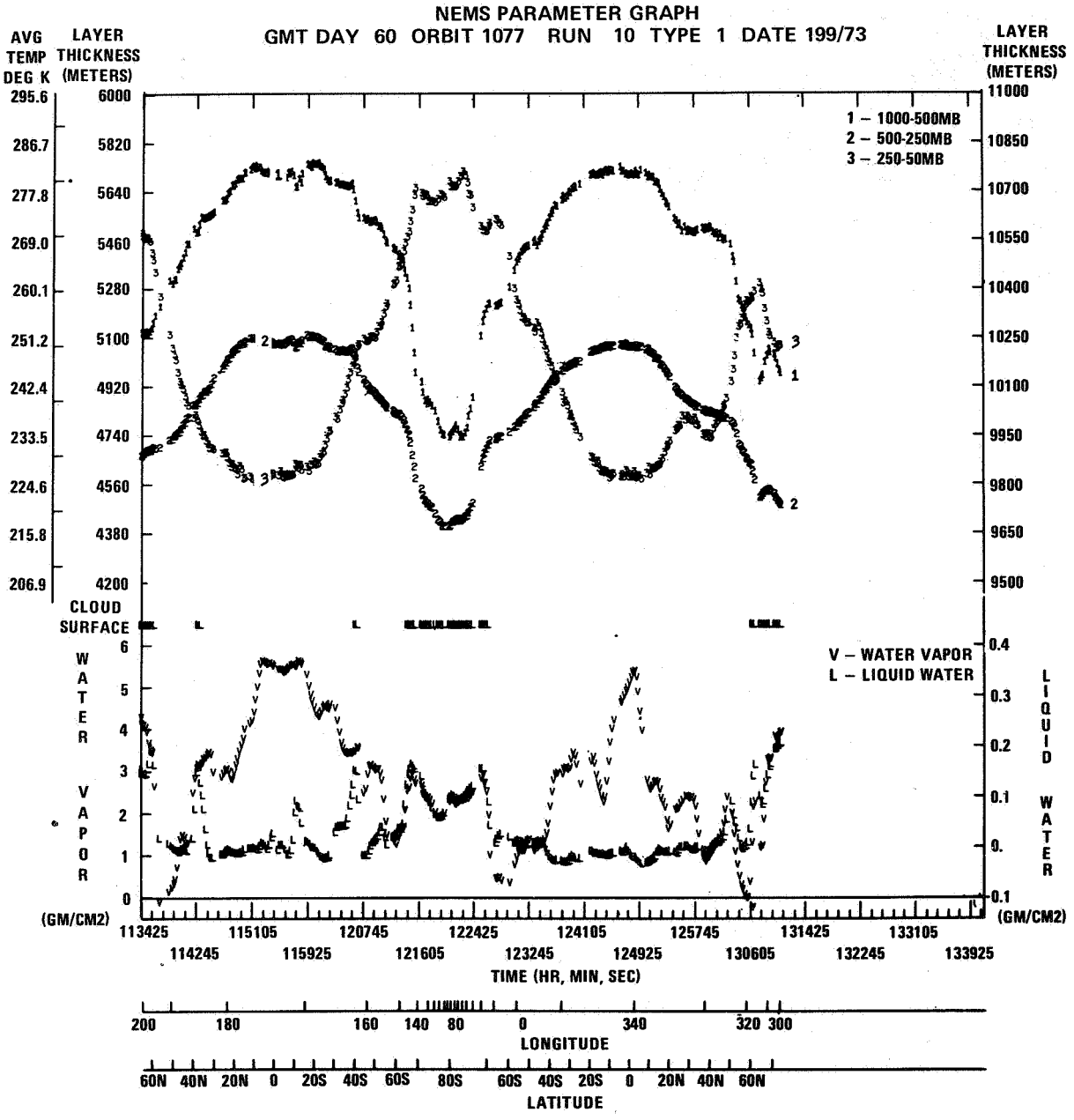


Figure 1-14. NEMS Parameter Graph for Orbit 1077 (1 March 1973). See Section 1.7 for explanation of figure.

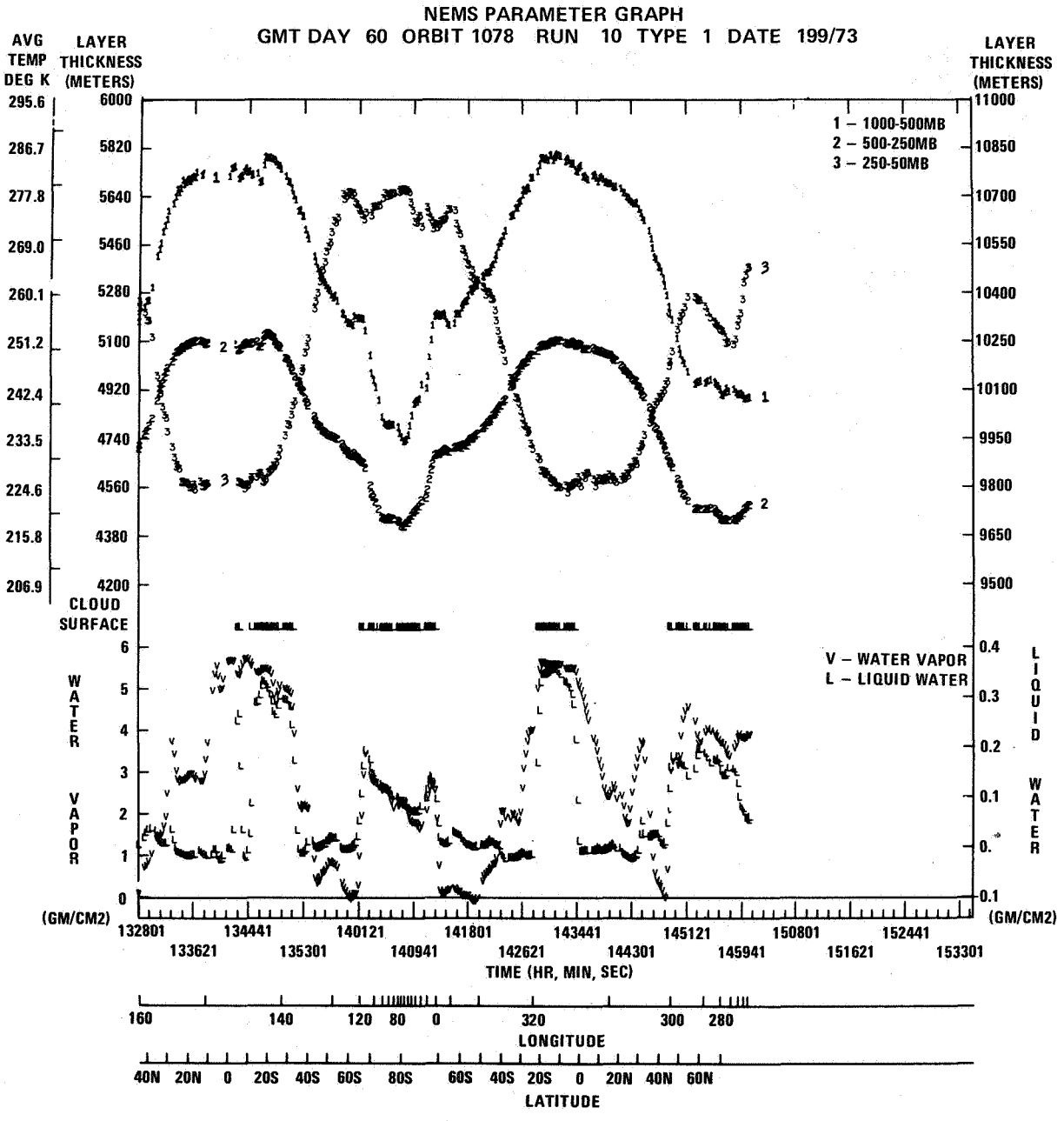


Figure 1-15. NEMS Parameter Graph for Orbit 1078 (1 March 1973). See Section 1.7 for explanation of figure.

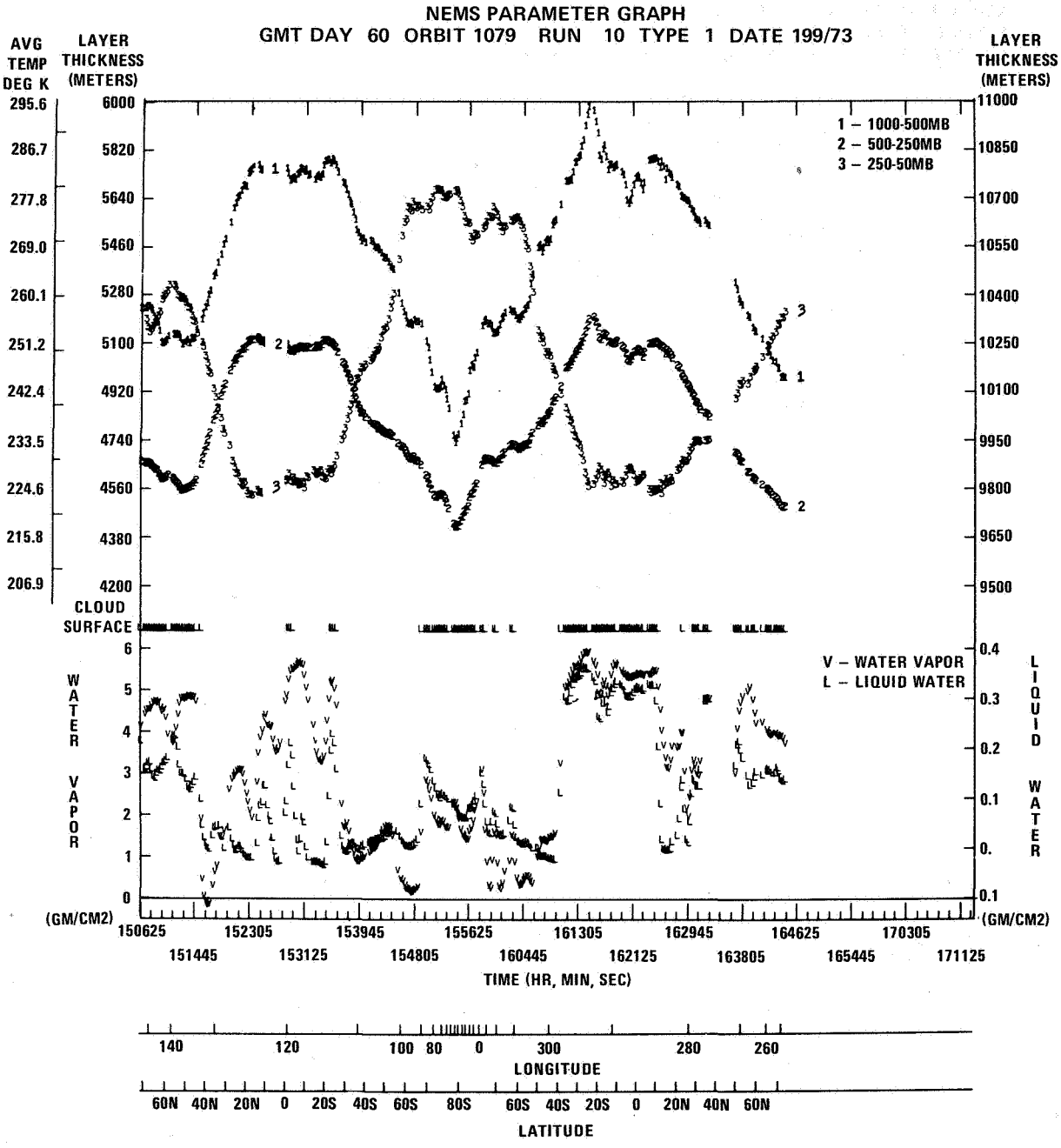


Figure 1-16. NEMS Parameter Graph for Orbit 1079 (1 March 1973). See Section 1.7 for explanation of figure.

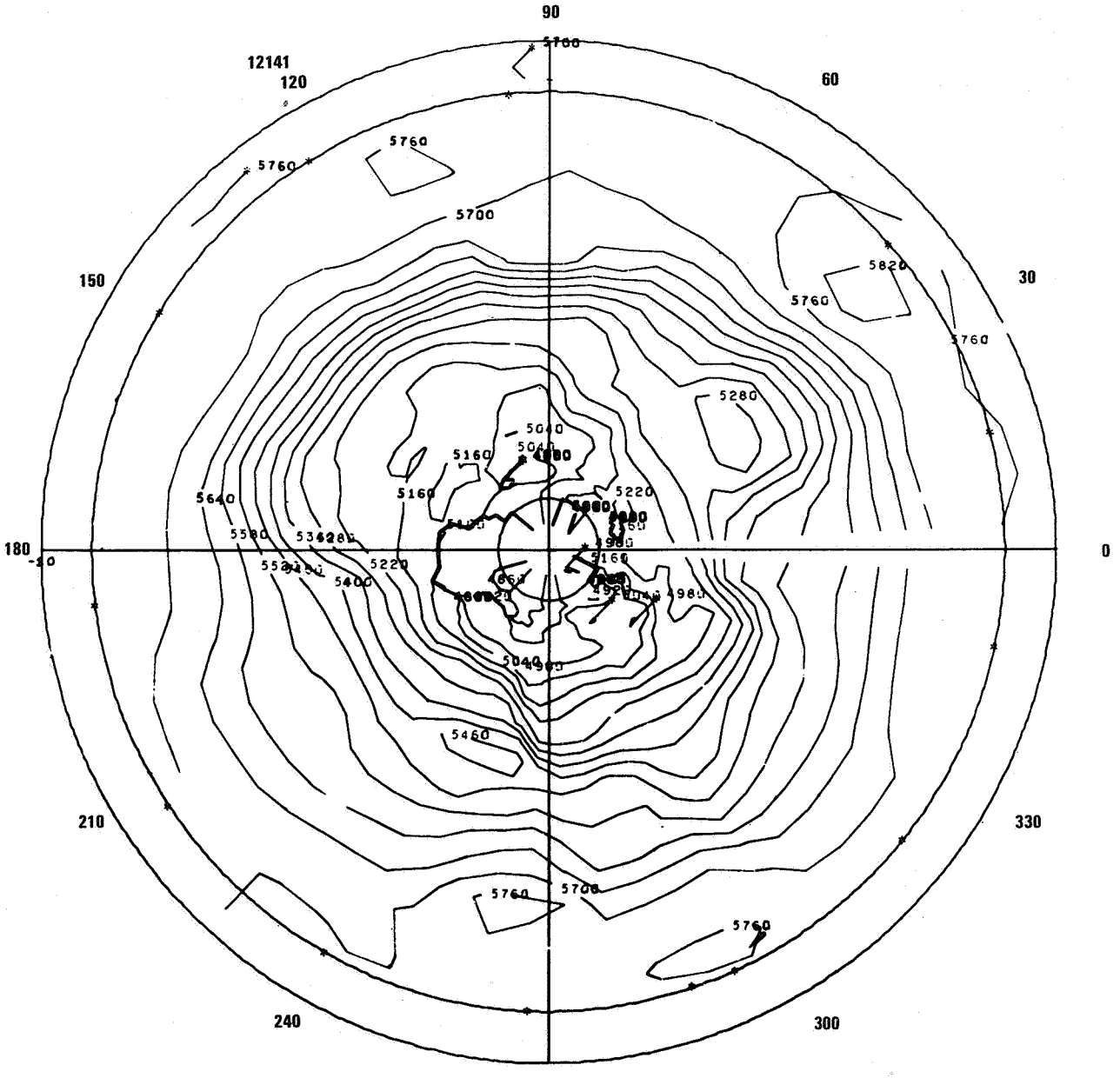


Figure 1-17. NEMS 1000-500 mb North Pole Parameter Map of Data from 4 March 1973.

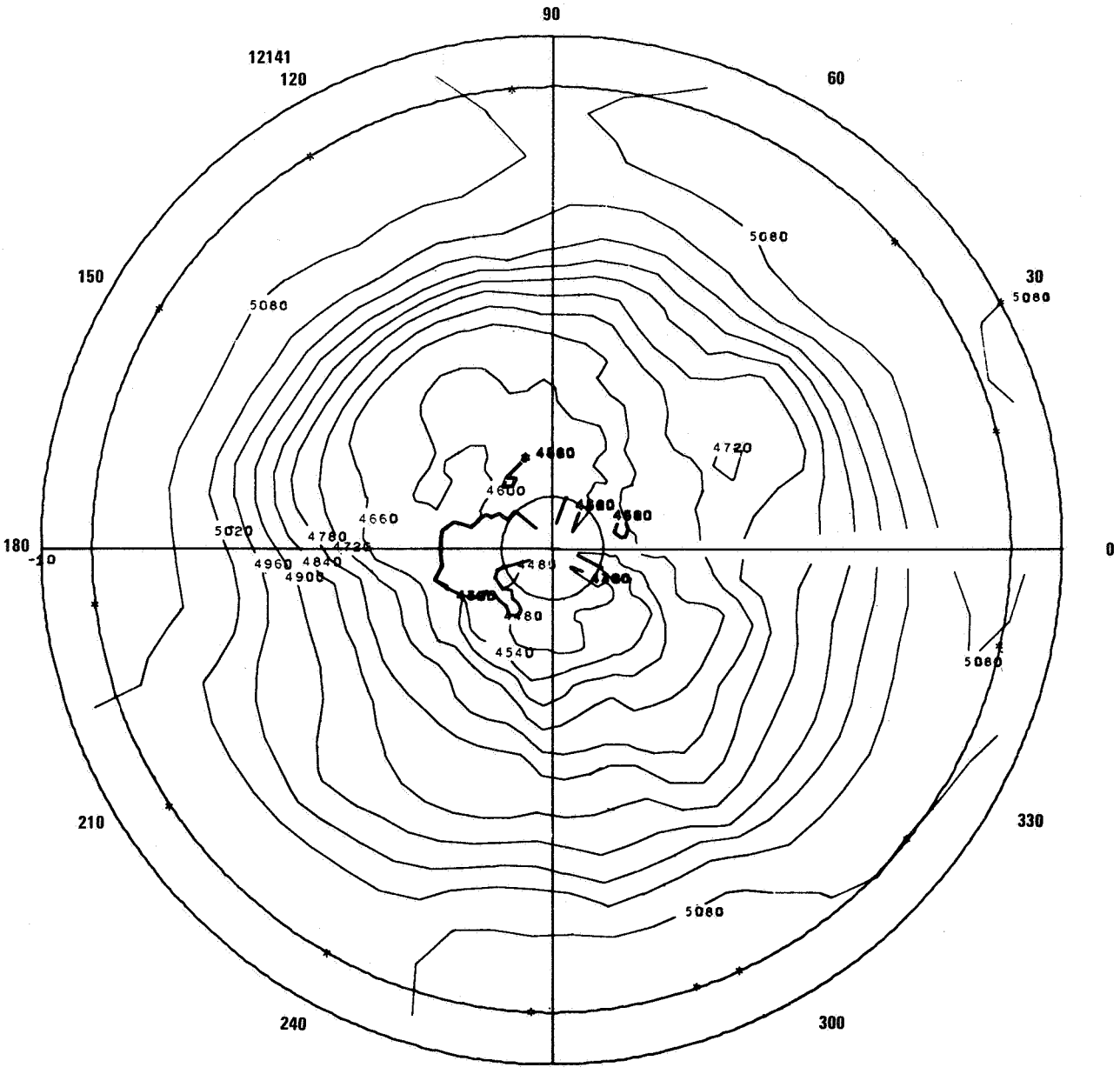


Figure 1-18. NEMS 500-250 mb North Pole Parameter Map of Data from 4 March 1973.

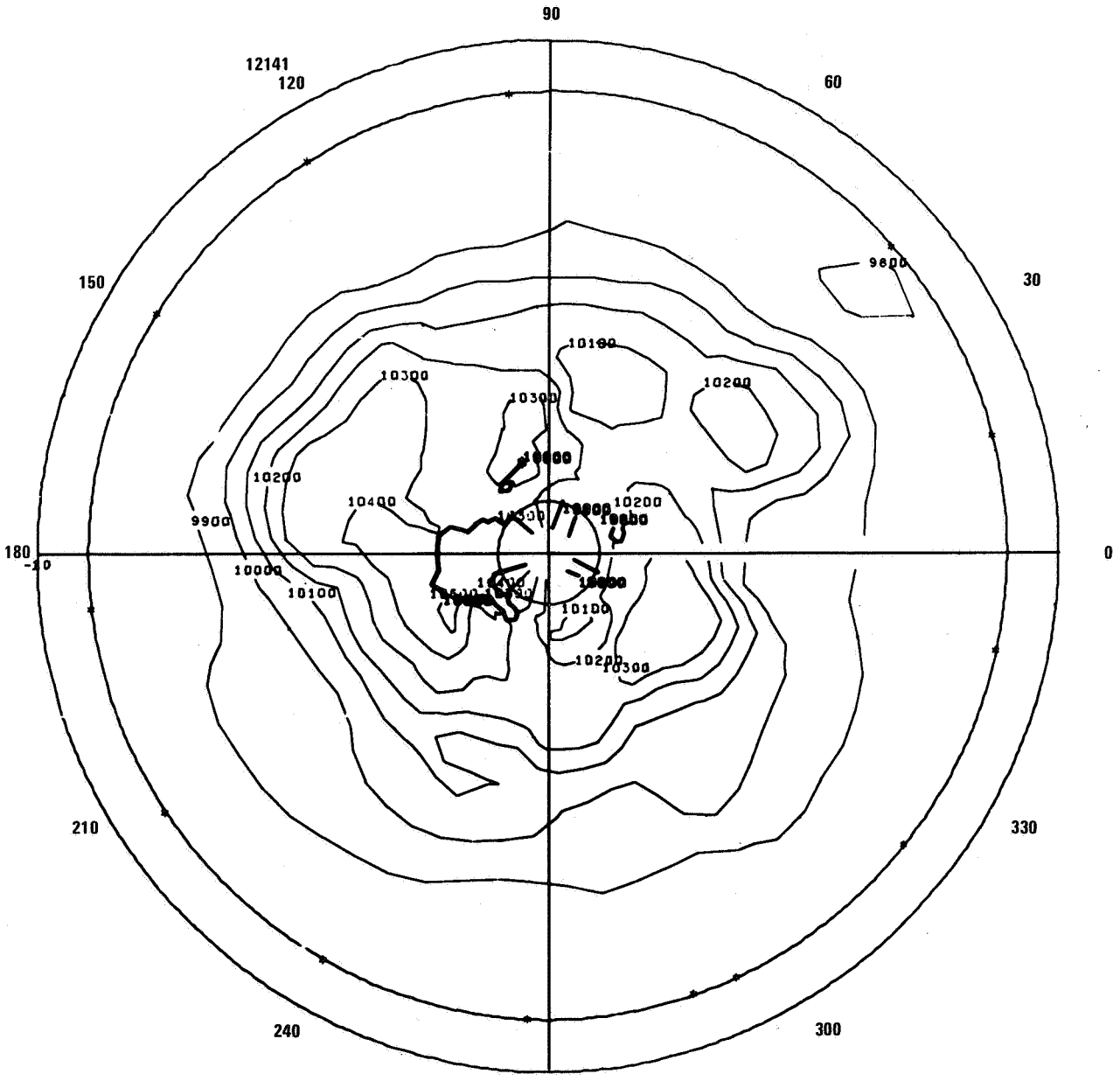


Figure 1-19. NEMS 250-50 mb North Pole Parameter Map of Data from 4 March 1973.

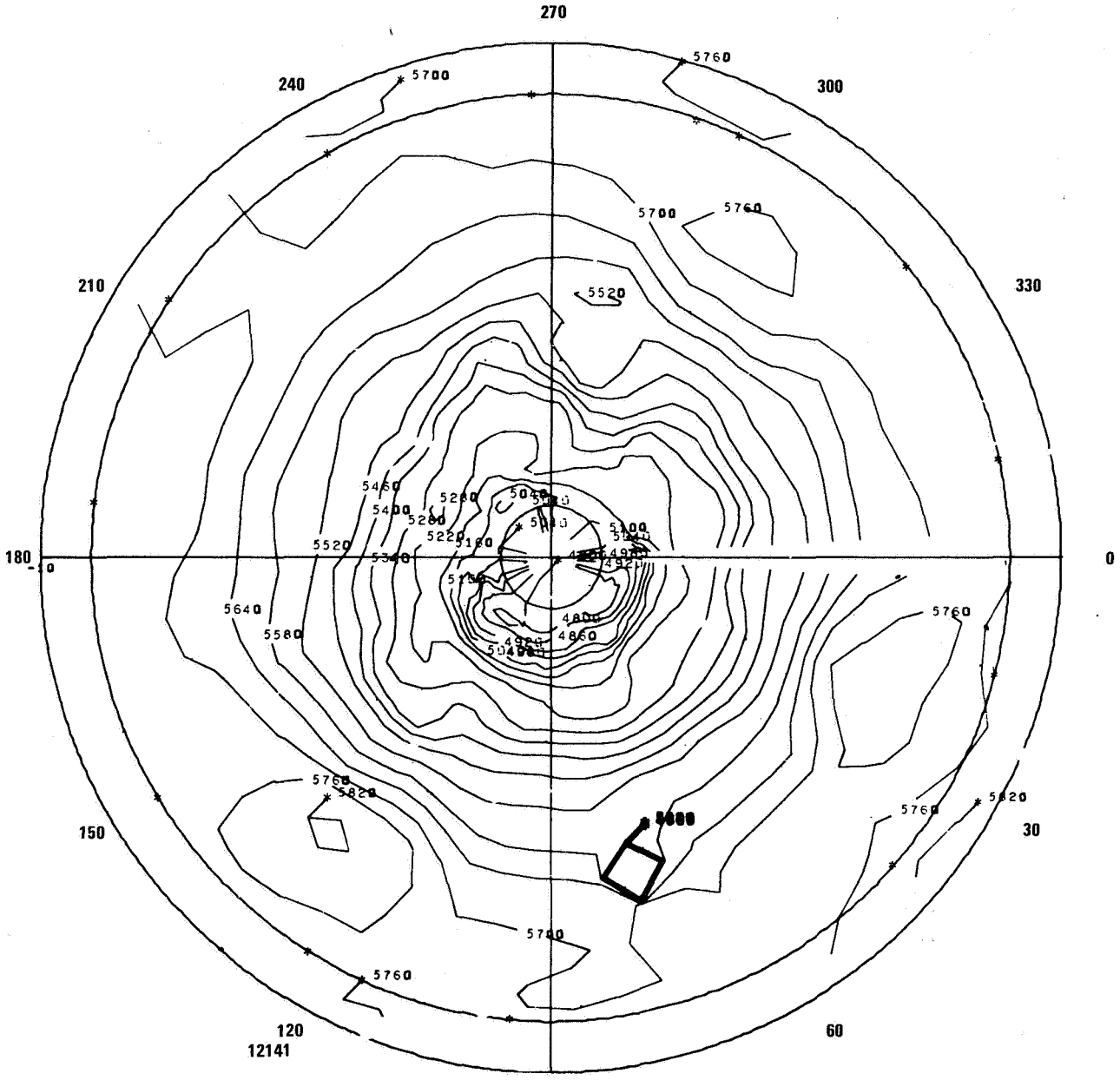


Figure 1-20. NEMS 1000-500 mb South Pole Parameter Map of Data from 4 March 1973.

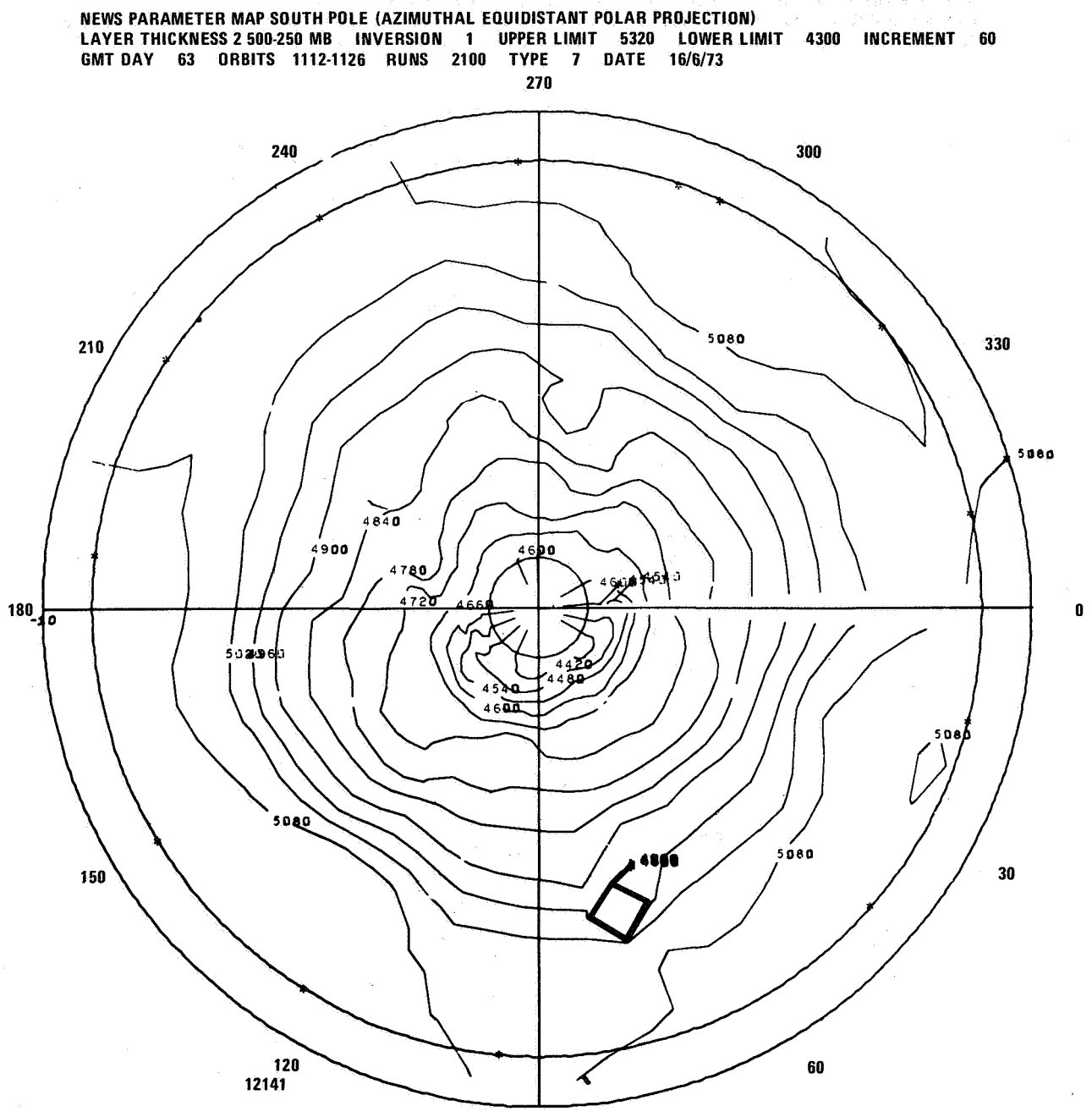


Figure 1-21. NEMS 500-250 mb South Pole Parameter Map of Data from 4 March 1973.

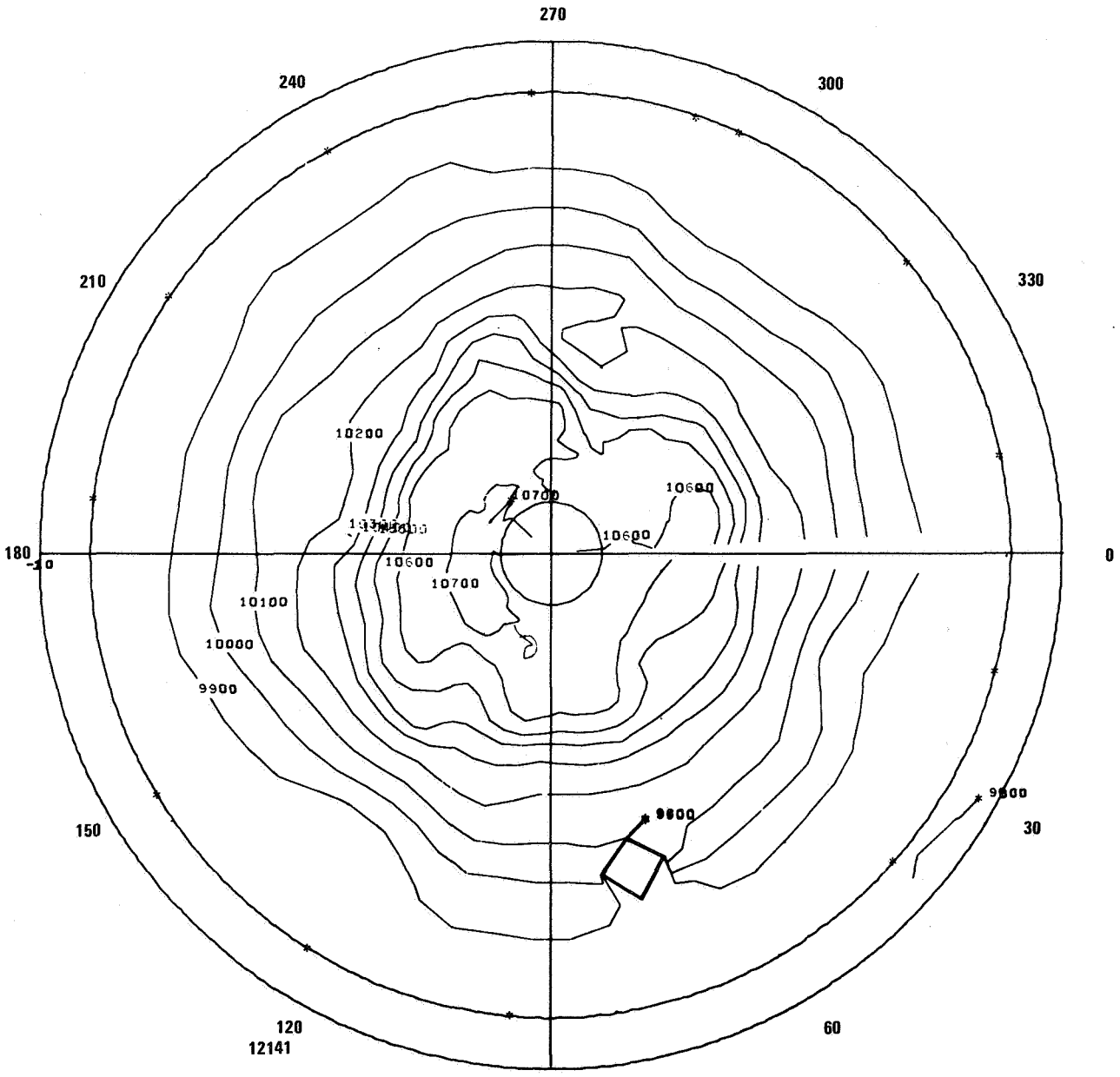


Figure 1-22. NEMS 250-50 mb South Pole Parameter Map of Data from 4 March 1973.

SECTION 2

THE ORBITAL ELEMENTS AND DATA AVAILABILITY ON-OFF TIMES

The Nimbus 5 Brouwer Mean orbital elements for selected epochs during April and May 1973 are listed in Table 2-1.

Table 2-1

Nimbus 5 Brouwer Mean Orbital Elements
For April and May 1973

Epoch	Universal Time	8 Apr 73 00 00 00	23 Apr 73 00 00 00	6 May 73 00 00 00	20 May 73 00 00 00
Semi-Major Axis	Km	7473.574	7473.569	7473.566	7473.563
Eccentricity		.000800	.000790	.000813	.000835
Inclination	Degrees	99.945	99.945	99.944	99.944
Argument of Perigee	Degrees	313.536	275.016	241.201	206.393
Right Ascension of Ascending Node	Degrees	8.641	23.426	36.239	50.038
Height of Perigee	Km	1089.43	1089.50	1089.33	1089.16
Height of Apogee	Km	1101.38	1101.31	1101.48	1101.64
Anomalistic Period	Minutes	107.1642	107.1642	107.1641	107.1641
Motion of Perigee	Degrees per day	-2.4338	-2.4338	-2.4339	-2.4340

The data availability on-off times (Table 2-2) list the times when the data from each instrument was recorded on a HDRSS.

THIR orbital coverage in Table 2-2 is divided between daytime and nighttime data. The THIR data is normally recorded simultaneously from both 6.7 μm and 11.5 μm channels. Therefore, the listed on-off times apply to both channels.

A THIR data orbit is defined as beginning and ending at the night-day terminator. Thus, the daytime data orbit extends from the night-day terminator to the day-night

terminator. Each daytime THIR data orbit is assigned the orbit number of the ascending node which occurs during that portion of the orbit. The same orbit number is assigned also to the succeeding nighttime data orbit.

The "INT ORBIT & STDN" identify the orbit and the ground station to which the satellite data is transmitted. The letter "R" denotes Rosman, North Carolina; the letter "A" denotes Fairbanks, Alaska.

The "HDRSS" identifies the satellite tape recorder, either A or B.

The "THIR GRID CORR" columns are used to indicate an image grid error in latitude and longitude whenever either is in error by more than one degree of great circle arc (60 n. m.). Latitude errors are suffixed by an N or S; longitude errors, by an E or W. An N or S indicates the grid should be moved up or down by the amount shown to obtain a good fit of the grid to the geography. An E or W indicates the grid should be moved right or left, at the equator, by the amount shown.

Ascending node times and longitudes are the times and longitudes at which the satellite crosses the equator in the northbound direction. These crossings always occur during the daytime portion of the orbit. The descending nodes and times refer to the southbound crossings, which occur during the nighttime portion of the orbit.

ESMR, NEMS, SCR, and ITPR are normally on all the time. Their sensory information is recorded on a HDRSS between interrogations, and their on- and off-times define the total record times between interrogations. An interrogation orbit is the orbit during which previously recorded data is transmitted to a ground station. This data will be from segments of two or more data orbits. To determine the orbital coverage of the data from any interrogation, the on- and off-times should be matched with the appropriate ascending or descending node listed with the THIR information on the same page of Table 2-2. Coverage can then be determined as described below.

The "DATA ORBIT" indicator in the ESMR table is given only for reference purposes. It is the number which appears on the data display image, samples of which are reproduced in Section 3, and identifies the last data orbit on each display. It should not be confused with the THIR data orbit number.

Table 2-2 together with the World Map (Figure 2-1) and the vellum Subsatellite Tracks Overlay attached to the back of this catalog, can be used to determine approximate geographic coverages.

A Subsatellite Tracks Overlay is correctly oriented with the World Map when the ascending or descending node line on the overlay coincides with the 0-degree latitude (equator) line of the World Map. Orbital coverage is determined by placing an orbit track on the world map at the appropriate ascending node (for daytime) or descending node (for nighttime) longitude for the orbit of interest.

The Subsatellite Tracks Overlay contains 14 correctly spaced tracks, which end at the approximate earth day-night transitions. The tracks contain time ticks

spaced 5 minutes apart, appropriately annotated at the edge of the overlay, referenced from the equator. Times in minutes from equator crossings for all or part of a particular orbit are calculated by adding or subtracting from the ascending or descending node time listed for that orbit in the Data Availability On-Off Times Table.

The nature and format of the data to be available from each experiment are explained in detail in the respective sections of The Nimbus 5 User's Guide. The appropriate sources for requesting the various data types are listed in Section 1.7 of the same manual.

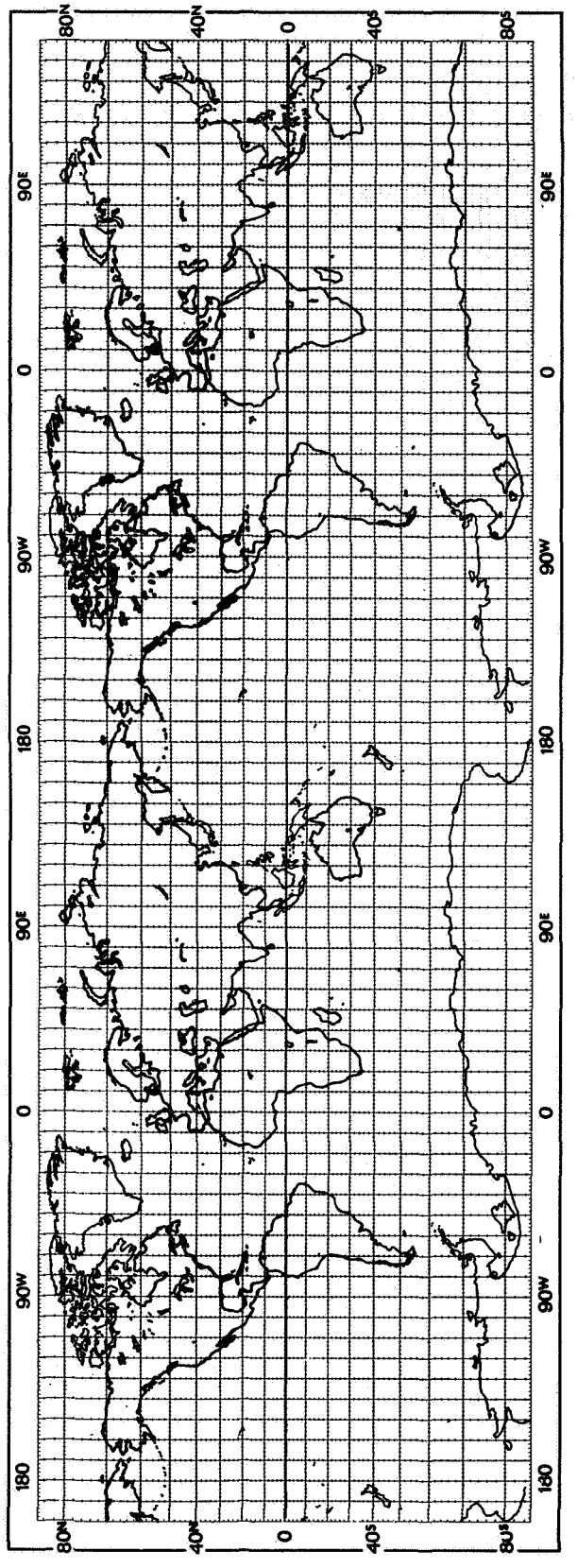


Figure 2-1 World Map

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
1 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1486	2340	0028	1488R	A		000340	E171.7	1486	2235	0034	1488R	A
1487						015056	E144.9	1488	0230	0416	1488R	B
1488	0314	0403	1488R	B		033813	E118.0	1489	0422	0602	1489R	B
1489	0501	0550	1489R	B		052529	E091.2	1490	0608	0744	1490A	B
1490	0649	0737	1490A	B		071246	E064.4	1491	0748	0929	1491A	B
1491	0836	0925	1491A	B		090002	E037.6	1492	0934	1118	1492A	B
1492	1023	1112	1492A	B		104719	E010.7	1493	1123	1302	1493A	B
1493	1211	1259	1493A	B		123435	W016.1	1494	1307	1449	1494A	B
1494	1358	1425	1494A	B		142152	W042.9	1495	1453	1632	1495A	B
1494	1429	1447	1494A	B				1496	1636	1817	1496A	B
1495	1545	1631	1495A	B		160908	W069.7	1497	1822	2003	1497A	B
1496	1732	1816	1496A	B		175625	W096.5	1498	2009	2147	1498A	B
1497	1920	2003	1497A	B	1N	194342	W123.4					
1498	2107	2147	1498A	B		213058	W150.2					
1499						231815	W177.0					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1486						005715	W021.8	0230	0416	1488R	B	
1487	0231	0314	1488R	B		024432	W048.6	0422	0602	1489R	B	
1488	0403	0416	1488R	B		043148	W075.4	0607	0743	1490A	B	
1488	0422	0501	1489R	B				0748	0929	1491A	B	
1489	0550	0601	1489R	B		061905	W102.2	0934	1118	1492A	B	
1489	0607	0649	1490A	B				1123	1302	1493A	B	
1490	0737	0743	1490A	B		080622	W129.0	1307	1449	1494A	B	
1490	0748	0836	1491A	B				1454	1631	1495A	B	
1491	0934	1023	1492A	B		095338	W155.9	1636	1817	1496A	B	
1492	1122	1211	1493A	B	1N	114055	E177.4	1822	2003	1497A	B	
1493	1307	1358	1494A	B		132811	E150.6	2009	2147	1498A	B	
1494	1454	1545	1495A	B		151528	E123.7					
1495	1636	1732	1496A	B		170244	E096.9					
1496	1822	1920	1497A	B	1S	185001	E070.1					
1497	2009	2107	1498A	B		203717	E043.3					
1498						222434	E016.4					
1499						001151	W010.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
2 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1500						010531	E156.2	1501	0137	0325	1502R	A
1501	0229	0318	1502R	A		025248	E129.4	1502	0325	0517	1502R	B
1502	0416	0505	1502R	B		044004	E102.5	1503	0521	0712	1504A	B
1503	0603	0652	1504A	B	1S1E	062721	E075.7	1504	0709	0848	1504A	A
1504	0751	0839	1504A	A		081437	E048.9	1505	0849	1031	1505A	B
1505	0938	1027	1505A	B		100154	E022.1	1506	1036	1216	1506A	B
1506	1125	1214	1506A	B		114911	W004.7	1507	1221	1406	1507A	B
1507	1313	1401	1507A	B		133627	W031.6	1508	1411	1544	1508A	B
1508	1500	1547	1508A	B		152344	W058.4	1509	1552	1732	1509A	B
1509	1647	1732	1509A	B		171100	W085.2	1510	1737	1918	1510A	B
1510	1834	1917	1510A	B		185817	W112.0	1511	1922	2105	1511A	B
1511	2022	2103	1511A	B		204533	W138.8	1512	2110	2252	1512A	B
1512	2209	2251	1512A	B		223250	W165.7					
1512	2252	2258	1515R	A								
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1500	0137	0229	1502R	A		015907	W037.2	0137	0325	1502R	A	
1501	0318	0324	1502R	A		034624	W064.0	0325	0516	1502R	B	
1501	0325	0416	1502R	B				0521	0711	1504A	B	
1502	0505	0515	1502R	B		053340	W090.8	0709	0848	1504A	A	
1502	0521	0603	1504A	B	1N1W			0849	1031	1505A	B	
1503	0652	0710	1504A	B	1N1W	072057	W117.7	1035	1215	1506A	B	
1503	0709	0751	1504A	A				1221	1406	1507A	B	
1504	0839	0848	1504A	A		090813	W144.5	1411	1548	1508A	B	
1504	0849	0938	1505A	B				1553	1731	1509A	B	
1505	1036	1125	1506A	B		105530	W171.3	1737	1917	1510A	B	
1506	1221	1313	1507A	B		124246	E161.9	1922	2105	1511A	B	
1507	1411	1500	1508A	B		143003	E135.1	2110	2251	1512A	B	
1508	1553	1647	1509A	B		161720	E108.2	2251	0050	1515R	A	
1509	1738	1834	1510A	B		180436	E081.4					
1510	1923	2022	1511A	B		195153	E054.6					
1511	2110	2209	1512A	B		213909	E027.8					
1512	2258	2356	1515R	A		232626	E001.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
3 APRIL 1973

THIR							ASC. AND		ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID		DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR						ASC. NODE						
1513	2356	0045	1515R	A			002006	E167.6	1513	2252	0051	1515R	A
1514							020723	E140.7	1515	0247	0432	1515R	B
1515	0331	0420	1515R	B			035439	E113.9	1516	0437	0618	1516R	B
1516	0518	0607	1516R	B			054156	E087.1	1517	0624	0801	1517A	B
1517	0705	0754	1517A	B			072913	E060.3	1518	0806	0946	1518A	B
1518	0853	0941	1518A	B			091629	E033.5	1519	0951	1131	1519A	B
1519	1040	1129	1519A	B			110346	E006.6	1520	1137	1319	1520A	B
1520	1227	1316	1520A	B			125102	W020.2	1521	1323	1506	1521A	B
1521	1415	1503	1521A	B			143819	W047.0	1522	1510	1650	1522A	B
1522	1602	1648	1522A	B			162535	W073.8	1523	1654	1833	1523A	B
1523	1749	1831	1523A	B			181252	W100.6	1524	1837	2020	1524A	B
1524	1936	2019	1524A	B			200008	W127.5	1525	2025	2206	1525A	B
1525	2124	2205	1525A	B			214725	W154.3					
1526							2334.4	E178.9					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
1513							011342	W025.9	0246	0432	1515R	B	
1514	0247	0331	1515R	B			030059	W052.7	0437	0618	1516R	B	
1515	0420	0432	1515R	B			044815	W079.5	0623	0801	1517A	B	
1515	0437	0518	1516R	B					0806	0945	1518A	B	
1516	0607	0617	1516R	B			063532	W106.3	0950	1131	1519A	B	
1516	0623	0705	1517A	B					1136	1319	1520A	B	
1517	0754	0800	1517A	B			082249	W133.1	1323	1505	1521A	B	
1517	0806	0853	1518A	B					1510	1649	1522A	B	
1518	0950	1040	1519A	B			101005	W160.0	1654	1832	1523A	B	
1519	1136	1227	1520A	B			115722	E173.2	1837	2019	1524A	B	
1520	1324	1415	1521A	B			134438	E146.4	2025	2205	1525A	B	
1521	1510	1602	1522A	B			153155	E119.6					
1522	1654	1749	1523A	B			171911	E092.8					
1523	1838	1936	1524A	B			190628	E066.0					
1524	2025	2124	1525A	B			205344	E039.2					
1525							224101	E012.3					
1526	0007	0058	1529R	A			002818	W014.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
4 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1527	0058	0147	1529R	A		012158	E152.1	1527	0007	0203	1529R	A
1528	0246	0334	1528R	B		030915	E125.3	1528	0152	0351	1528R	B
1529	0433	0522	1529R	B		045631	E098.4	1529	0356	0527	1529R	B
1530	0620	0709	1530A	B	1E	064348	E071.6	1530	0537	0714	1530A	B
1531	0807	0856	1531A	B		083104	E044.8	1531	0719	0901	1531A	B
1532	0955	1043	1532A	B		101821	E018.0	1532	0906	1047	1532A	B
1533	1142	1231	1533A	B		120537	W008.8	1533	1052	1134	1533A	B
1534	1329	1418	1534A	B		135254	W035.7	1534	1139	1421	1534A	B
1535	1517	1603	1535A	B		154010	W062.5	1535	1425	1605	1535A	B
1536	1704	1748	1536A	B		172727	W089.3	1536	1609	1749	1536A	B
1537	1851	1932	1537A	B		191443	W116.1	1537	1754	1934	1537A	B
1538	2038	2120	1538A	B		210200	W142.9	1538	1938	2113	1538A	B
1539	2226	2305	1539A	B		224917	W169.8	1539	2125	2306	1539A	B
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1527	0147	0202	1529R	A		021534	W041.3		0007	0227	1529R	A
1527	0153	0246	1528R	B					0153	0350	1528R	B
1528	0334	0349	1528R	B		040251	W068.1		0355	0527	1529R	B
1528	0356	0433	1529R	B					0537	0714	1530A	B
1529	0522	0531	1529R	B		055007	W095.0		0719	0900	1531A	B
1529	0537	0620	1530A	B	1W				0905	1047	1532A	B
1530	0719	0807	1531A	B		073724	W121.8		1051	1234	1533A	B
1531	0905	0955	1532A	B		092440	W148.6		1239	1421	1534A	B
1532	1053	1142	1533A	B		111157	W175.4		1425	1604	1535A	B
1533	1239	1329	1534A	B		125913	E157.8		1609	1749	1536A	B
1534	1426	1517	1535A	B		144630	E131.0		1754	1933	1537A	B
1535	1609	1704	1536A	B		163347	E104.1		1938	2120	1538A	B
1536	1754	1851	1537A	B		182103	E077.3		2125	2306	1539A	B
1537	1940	2038	1538A	B		200820	E050.5		2310	0108	1542R	A
1538	2127	2226	1539A	B		215536	E023.7					
1539	2314	0013	1542R	A		234253	W003.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
5 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1540	0013	0102	1542R	A		003633	E163.4	1540	2210	0109	1542R	A
1541						022350	E136.6	1542	0301	0449	1542R	B
1542	0348	0436	1542R	B		041106	E109.8	1543	0453	0645	1544A	B
1543	0535	0624	1544A	B	1E	055823	E083.0	1544	0637	0820	1544A	A
1544	0722	0811	1544A	A		074539	E056.2	1545	0821	1003	1545A	B
1545	0909	0958	1545A	B		093256	E029.4	1546	1008	1150	1546A	B
1546	1057	1145	1546A	B		112012	E002.5	1547	1154	1335	1547A	B
1547	1244	1333	1547A	B		130729	W024.3	1548	1339	1521	1548A	B
1548	1431	1519	1548A	B		145445	W051.1	1549	1525	1705	1549A	B
1549	1619	1704	1549A	B		164202	W077.9	1550	1709	1848	1550A	B
1550	1806	1847	1550A	B		182919	W104.7	1551	1852	2036	1551A	B
1551	1953	2035	1551A	B		201635	W131.6	1552	2040	2223	1552A	B
1552	2140	2222	1552A	B		220352	W158.4					
1553						235108	E174.8					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1540	0102	0108	1542R	A		013009	W030.0		0301	0448	1542R	B
1541	0302	0348	1542R	B		031726	W056.8		0453	0645	1544A	B
1542	0436	0448	1542R	B		050442	W083.6		0637	0820	1544A	A
1542	0453	0535	1544A	B	1W				0821	1003	1545A	B
1543	0624	0644	1544A	B	1W	065159	W110.4		1008	1149	1546A	B
1543	0638	0722	1544A	A					1154	1335	1547A	B
1544	0811	0819	1544A	A		083916	W137.3		1339	1520	1548A	B
1544	0821	0909	1545A	B					1525	1705	1549A	B
1545	1008	1057	1546A	B		102632	W164.1		1709	1848	1550A	B
1546	1154	1244	1547A	B		121349	E169.1		1852	2036	1551A	B
1547	1339	1431	1548A	B		140105	E142.3		2040	2223	1552A	B
1548	1525	1619	1549A	B		154822	E115.5					
1549	1710	1806	1550A	B		173538	E088.7					
1550	1855	1953	1551A	B		192255	E061.8					
1551	2042	2140	1552A	B		211011	E035.0					
1552						225728	E008.2					
1553	0023	0115	1556R	A		004445	W018.6					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
6 APRIL 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1554	0115	0204	1556R	A		013825	E148.0	1554	0023	0219	1556R	A
1555	0302	0351	1555R	B		032541	E121.1	1555	0209	0407	1555R	B
1556	0450	0538	1556R	B		051258	E094.3	1556	0413	0550	1556R	B
1557	0637	0726	1557A	B		070014	E067.5	1557	0555	0732	1557A	B
1558	0824	0913	1558A	B		084731	E040.7	1558	0737	0918	1558A	B
1559	1011	1100	1559A	B		103448	E013.9	1559	0923	1106	1559A	B
1560	1159	1247	1560A	B		122204	W013.0	1560	1110	1250	1560A	B
1561	1346	1435	1561A	B		140921	W039.8	1561	1255	1436	1561A	B
1562	1533	1621	1562A	B		155637	W066.6	1562	1442	1622	1562A	B
1563	1721	1804	1563A	B		174354	W093.4	1563	1627	1805	1563A	B
1564	1908	1948	1564A	B	2S	193110	W120.2	1564	1809	1950	1564A	B
1565	2055	2131	1565A	B		211827	W147.1	1565	1955	2132	1565A	B
1565	2137	2144	1566A	B				1566	2138	2324	1566A	B
1566	2242	2323	1566A	B		230543	W173.9					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1554	0204	0218	1556R	A		023201	W045.4		0023	0218	1556R	A
1554	0209	0302	1555R	B					0210	0407	1555R	B
1555	0351	0406	1555R	B		041918	W072.2		0414	0550	1556R	B
1555	0414	0450	1556R	B					0554	0732	1557A	B
1556	0538	0549	1556R	B		060634	W099.1		0737	0918	1558A	B
1556	0554	0637	1557A	B					0922	1105	1559A	B
1557	0726	0731	1557A	B		075351	W125.9		1110	1250	1560A	B
1557	0737	0824	1558A	B					1255	1435	1561A	B
1558	0923	1011	1559A	B		094107	W152.7		1442	1621	1562A	B
1559	1110	1159	1560A	B		112824	W179.5		1627	1805	1563A	B
1560	1255	1346	1561A	B		131540	E153.7		1809	1950	1564A	B
1561	1442	1533	1562A	B		150257	E126.8		1955	2132	1565A	B
1562	1627	1721	1563A	B		165014	E100.0		2137	2324	1566A	B
1563	1809	1908	1564A	B	2N	183730	E073.2		2326	0123	1569R	A
1564	1957	2055	1565A	B		202447	E046.4					
1565	2144	2242	1566A	B		221203	E019.6					
1566	2331	0030	1569R	A	1W	235920	W007.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
7 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1567	0030	0118	1569R	A	1E	005300	E159.3	1567	2326	0124	1569R	A
1568						024016	E132.5	1569	0316	0502	1569R	B
1569	0404	0453	1569R	B		042733	E105.7	1570	0508	0652	1570R	B
1570	0552	0640	1570R	B		061450	E078.9	1571	0657	0834	1571A	B
1571	0739	0828	1571A	B		080206	E052.1	1572	0839	1020	1572A	B
1572	0926	1015	1572A	B		094923	E025.2	1573	1025	1205	1573A	B
1573	1113	1202	1573A	B		113639	W001.6	1574	1210	1352	1574A	B
1574	1301	1349	1574A	B		132356	W028.4	1575	1357	1535	1575A	B
1575	1448	1534	1575A	B		151112	W055.2	1576	1540	1718	1576A	B
1576	1635	1716	1576A	B	1S	165829	W082.0	1577	1723	1905	1577A	B
1577	1822	1904	1577A	B		184546	W108.9	1578	1910	2049	1578A	B
1578	2010	2048	1578A	B		203302	W135.7	1579	2054	2236	1579A	B
1579	2157	2235	1579A	B		222019	W162.5					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1567						014636	W034.1		0315	0502	1569R	B
1568	0316	0404	1569R	B		033353	W060.9		0508	0651	1570R	B
1569	0453	0501	1569R	B		052109	W087.7		0657	0834	1571A	B
1569	0508	0552	1570R	B					0839	1019	1572A	B
1570	0640	0652	1570R	B		070826	W114.5		1025	1205	1573A	B
1570	0657	0739	1571A	B					1210	1352	1574A	B
1571	0828	0833	1571A	B		085542	W141.4		1357	1535	1575A	B
1571	0839	0926	1572A	B					1540	1718	1576A	B
1572	1025	1113	1573A	B		104259	W168.2		1723	1905	1577A	B
1573	1210	1301	1574A	B		123016	E165.0		1910	2049	1578A	B
1574	1357	1448	1575A	B		141732	E138.2		2054	2236	1579A	B
1575	1540	1635	1576A	B	1N	160449	E111.4					
1576	1724	1822	1577A	B		175205	E084.5					
1577	1911	2010	1578A	B		193922	E057.7					
1578	2059	2157	1579A	B		212638	E030.9					
1579						231355	E004.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
8 APRIL 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID	ASC. AND DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR					ASC. NODE						
1580						000735	E170.7	1581	0039	0234	1582R	A
1581	0132	0220	1582R	A		015452	E143.9	1582	0234	0417	1582R	B
1582	0319	0408	1582R	B		034208	W117.0	1583	0425	0605	1583R	B
1583	0506	0555	1583R	B		052925	E090.2	1584	0612	0748	1584A	B
1584	0653	0742	1584A	B		071641	E063.4	1585	0752	0934	1585A	B
1585	0841	0930	1585A	B		090358	E036.6	1586	0939	1120	1586A	B
1586	1028	1117	1586A	B		105114	E009.8	1587	1125	1309	1587A	B
1587	1215	1304	1587A	B		123831	W017.1	1588	1314	1451	1588A	B
1588	1403	1450	1588A	B		142547	W043.9	1589	1456	1636	1589A	B
1589	1550	1635	1589A	B		161304	W070.7	1590	1641	1820	1590A	B
1590	1737	1819	1590A	B		180020	W097.5	1591	1824	2004	1591A	B
1591	1924	2003	1591A	B		194737	W124.3	1592	2008	2153	1592A	B
1592	2112	2147	1592A	B		213454	W151.2	1593	2154	2353	1596R	A
1592	2154	2201	1596R	A								
1593	2259	2348	1596R	A		232210	W178.0					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1580	0039	0132	1582R	A		010111	W022.8	0039	0234	1582R	A	
1581	0220	0233	1582R	A		024828	W049.6	0234	0417	1582R	B	
1581	0235	0319	1582R	B				0425	0606	1583R	B	
1582	0408	0418	1582R	B		043545	W076.4	0607	0748	1584A	B	
1582	0425	0506	1583R	B				0752	0934	1585A	B	
1583	0555	0605	1583R	B		062301	W103.2	0939	1119	1586A	B	
1583	0610	0653	1584A	B				1125	1309	1587A	B	
1584	0753	0841	1585A	B		081018	W130.0	1315	1451	1588A	B	
1585	0939	1028	1586A	B		095734	W156.8	1456	1636	1589A	B	
1586	1125	1215	1587A	B		114451	E176.4	1641	1820	1590A	B	
1587	1315	1403	1588A	B		133207	E149.6	1825	2003	1591A	B	
1588	1456	1550	1589A	B		151924	E122.7	2009	2153	1592A	B	
1589	1641	1737	1590A	B		170641	E095.9	2154	2352	1596R	A	
1590	1826	1924	1591A	B		185357	E069.1					
1591	2013	2112	1591A	B		204114	E042.3					
1592	2201	2259	1596R	A		222830	E015.4					
1593						001547	W011.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
9 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1594						010927	E155.2	1596	0329	0520	1596R	B
1595						025643	E128.4	1597	0525	0707	1597R	B
1596	0421	0510	1596R	B		044360	E101.6	1598	0712	0850	1598A	B
1597	0608	0657	1597R	B		063116	E074.8	1599	0855	1034	1599A	B
1598	0755	0844	1598A	B		081833	E047.9	1600	1040	1220	1600A	B
1599	0943	1032	1599A	B		100549	E021.1	1601	1225	1407	1601A	B
1600	1130	1219	1600A	B		115306	W005.7	1602	1412	1552	1602A	B
1601	1317	1406	1601A	B		134022	W032.5	1603	1557	1734	1603A	B
1602	1505	1551	1602A	B		152739	W059.4	1604	1740	1919	1604A	B
1603	1652	1733	1603A	B		171456	W086.2	1605	1923	2104	1605A	B
1604	1839	1917	1604A	B		190212	W113.0	1606	2109	2254	1606A	B
1604	1923	1928	1605A	B	1W							
1605	2026	2103	1605A	B	1W	204929	W139.8					
1605	2109	2115	1606A	B								
1606	2214	2253	1606A	B		223645	W166.6					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1594						020303	W038.2		0329	0519	1596R	B
1595	0330	0421	1596R	B		035020	W065.0		0525	0707	1597R	B
1596	0510	0519	1596R	B		053736	W091.8		0712	0850	1598A	B
1596	0525	0608	1597R	B					0855	1034	1599A	B
1597	0657	0707	1597R	B		072453	W118.7		1038	1220	1600A	B
1597	0713	0755	1598A	B					1225	1407	1601A	B
1598	0855	0943	1599A	B		091209	W145.5		1412	1552	1602A	B
1599	1039	1130	1600A	B		105926	W172.3		1558	1734	1603A	B
1600	1225	1317	1601A	B		124643	E160.9		1740	1918	1604A	B
1601	1412	1505	1602A	B		143359	E134.1		1923	2104	1605A	B
1602	1558	1652	1603A	B		162116	E107.2		2109	2254	1606A	B
1603	1741	1839	1604A	B		180832	E080.4					
1604	1928	2026	1605A	B	1E	195549	E053.6					
1605	2115	2214	1606A	B		214305	E026.8					
1606						233022	W000.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
10 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1607						002402	E166.6	1608	0056	0250	1609R	A
1608	0148	0237	1609R	A		021118	E139.8	1609	0250	0436	1609R	B
1609	0336	0424	1609R	B		035825	E112.9	1610	0441	0622	1610R	B
1610	0523	0612	1610R	B	2N	054551	E086.1	1611	0627	0805	1611A	B
1611	0710	0759	1611A	B	1E	073308	E059.3	1612	0810	0951	1612A	B
1612	0857	0946	1612A	B	1E	092024	E032.5	1613	0955	1136	1613A	B
1613	1045	1133	1613A	B		110741	E005.7	1614	1141	1323	1614A	B
1614	1232	1321	1614A	B		125458	W021.2	1615	1329	1509	1615A	B
1615	1419	1508	1615A	B		144214	W048.0	1616	1514	1652	1616A	B
1616	1607	1651	1616A	B		162931	W074.8	1617	1657	1836	1617A	B
1617	1754	1835	1617A	B		181647	W101.6	1618	1840	2021	1618A	B
1618	1941	2020	1618A	B		200403	W128.5	1619	2026	2210	1619A	B
1619	2128	2208	1619A	B		215120	W155.3	1620	2210	0008	1623R	A
1619	2210	2217	1623R	A								
1620	2316	0004	1623R	A		233837	E177.9					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1607	0056	0148	1609R	A		011738	W026.9		0055	0250	1609R	A
1608	0237	0249	1609R	A		030455	W053.7		0250	0436	1609R	B
1608	0251	0336	1609R	B					0441	0622	1610R	B
1609	0424	0436	1609R	B		045212	W080.5		0627	0805	1611A	B
1609	0442	0523	1610R	B	2S				0810	0950	1612A	B
1610	0612	0622	1610R	B	2S	063928	W107.3		0955	1136	1613A	B
1610	0627	0710	1611A	B	1W				1141	1323	1614A	B
1611	0759	0804	1611A	B	1W	082645	W134.1		1329	1509	1615A	B
1611	0810	0857	1612A	B	1W				1514	1652	1616A	B
1612	0955	1045	1613A	B		101401	W161.0		1657	1836	1617A	B
1613	1141	1232	1614A	B		120118	E172.3		1841	2021	1618A	B
1614	1329	1419	1615A	B		134834	E145.4		2026	2209	1619A	B
1615	1514	1607	1616A	B		153551	E118.6		2210	0008	1623R	A
1616	1657	1754	1617A	B		172307	E091.8					
1617	1843	1941	1618A	B		191024	E065.0					
1618	2030	2128	1619A	B		205740	E038.2					
1619	2217	2316	1623R	A		224457	E011.3					
1620						003214	W015.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
11 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1621						012553	E151.1	1622	0157	0354	1622R	B
1622	0250	0339	1622R	B		031310	E124.3	1623	0400	0522	1623R	B
1623	0438	0521	1623R	B		050026	E097.4	1624	0540	0719	1624A	B
1624	0625	0714	1624A	B		064743	E070.6	1625	0724	0907	1625A	B
1625	0812	0901	1625A	B		083500	E043.8	1626	0911	1052	1626A	B
1626	0959	1048	1626A	B		102216	E017.0	1627	1057	1237	1627A	B
1627	1147	1235	1627A	B		120933	W009.8	1628	1243	1423	1628A	B
1628	1334	1422	1628A	B		135649	W036.7	1629	1429	1608	1629A	B
1629	1521	1607	1629A	B		154406	W063.5	1630	1613	1751	1630A	B
1630	1709	1751	1630A	B		173122	W090.3	1631	1756	1936	1631A	B
1631	1856	1935	1631A	B	1N	191839	W117.1	1632	1941	2123	1632A	B
1632	2043	2122	1632A	B		210555	W143.9	1633	2127	2310	1633A	B
1633	2230	2309	1633A	B		225312	W170.7					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1621	0157	0250	1622R	B		021930	W042.3		0157	0354	1622R	B
1622	0339	0353	1622R	B		040647	W069.1		0359	0522	1623R	B
1622	0400	0438	1623R	B					0540	0719	1624A	B
1623	0541	0625	1624A	B		055403	W096.0		0724	0906	1625A	B
1624	0724	0812	1625A	B		074120	W122.8		0911	1052	1626A	B
1625	0911	0959	1626A	B		092836	W149.6		1057	1237	1627A	B
1626	1057	1147	1627A	B		111553	W176.4		1243	1422	1628A	B
1627	1243	1334	1628A	B		130309	E156.8		1429	1607	1629A	B
1628	1429	1521	1629A	B		145026	E130.0		1613	1751	1630A	B
1629	1613	1709	1630A	B		163743	E103.1		1755	1935	1631A	B
1630	1757	1856	1631A	B	1S	182459	E076.3		1941	2123	1632A	B
1631	1945	2043	1632A	B		201216	E049.5		2127	2310	1633A	B
1632	2132	2230	1633A	B		215932	E022.7					
1633						234649	W004.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
12 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1634						004028	E162.5	1635	0112	0305	1636R	A
1635	0205	0254	1636R	A		022745	E135.6	1636	0306	0451	1636R	B
1636	0352	0441	1636R	B		041502	E108.8	1637	0456	0638	1637R	B
1637	0540	0628	1637R	B		060218	E082.0	1638	0643	0822	1638A	B
1638	0727	0816	1638A	B		074935	E055.2	1639	0827	1008	1639A	B
1639	0914	1003	1639A	B		093651	E028.3	1640	1013	1156	1640A	B
1640	1101	1150	1640A	B		112408	E001.5	1641	1200	1339	1641A	B
1641	1249	1337	1641A	B		131124	W025.3	1642	1345	1524	1642A	B
1642	1436	1523	1642A	B		145841	W052.1	1643	1529	1709	1643A	B
1643	1623	1707	1643A	B		164557	W078.9	1644	1713	1852	1644A	B
1644	1811	1851	1644A	B		183314	W105.7	1645	1857	2037	1645A	B
1645	1958	2036	1645A	B		202030	W132.6	1646	2042	2224	1646A	B
1646	2145	2223	1646A	B		220747	W159.4	1647	2227	0026	1650R	A
1646	2227	2234	1650R	A								
1647	2332	0021	1650R	A		235504	E173.8					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1634	0112	0205	1636R	A		013405	W031.0		0111	0305	1636R	A
1635	0254	0304	1636R	A		032122	W057.8		0305	0449	1636R	B
1635	0306	0352	1636R	B					0456	0638	1637R	B
1636	0440	0450	1636R	B		050838	W084.6		0643	0821	1638A	B
1636	0456	0540	1637R	B					0827	1007	1639A	B
1637	0628	0638	1637R	B		065555	W111.4		1013	1155	1640A	B
1637	0644	0727	1638A	B					1200	1338	1641A	B
1638	0827	0914	1639A	B		084312	W138.2		1345	1524	1642A	B
1639	1013	1101	1640A	B		103028	W165.1		1529	1708	1643A	B
1640	1200	1249	1641A	B		121745	E168.2		1713	1852	1644A	B
1641	1345	1436	1642A	B		140501	E141.3		1857	2037	1645A	B
1642	1529	1623	1643A	B		155218	E114.5		2042	2224	1646A	B
1643	1713	1811	1644A	B		173934	E087.7		2226	0025	1650R	A
1644	1859	1958	1645A	B		192651	E060.9					
1645	2047	2145	1646A	B		211407	E034.1					
1646	2234	2332	1650R	A		230124	E007.2					
1647						004840	W019.6					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
13 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1648						014220	E147.0	1649	0229	0409	1649R	B
1649	0307	0356	1649R	B		032937	E120.2	1650	0414	0539	1650R	B
1650	0454	0536	1650R	B	1N	051653	E093.3	1651	0559	0736	1651A	B
1651	0642	0730	1651A	B		070410	E066.5	1652	0741	0922	1652A	B
1652	0829	0918	1652A	B		085126	E039.7	1653	0926	1110	1653A	B
1653	1016	1105	1653A	B		103843	E012.9	1654	1114	1253	1654A	B
1654	1203	1252	1654A	B		122559	W013.9	1655	1259	1440	1655A	B
1655	1351	1439	1655A	B		141316	W040.8	1656	1445	1623	1656A	B
1656	1538	1622	1656A	B		160032	W067.6	1657	1627	1806	1657A	B
1657	1725	1805	1657A	B		174749	W094.4	1658	1812	1951	1658A	B
1658	1913	1950	1658A	B		193506	W121.2	1659	1956	2140	1659A	B
1658	1956	2001	1659A	B								
1659	2100	2139	1659A	B		212222	W148.0					
1660						230939	W174.9					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1648	0229	0307	1649R	B		023557	W046.4	0229	0409	1649R	B	
1649	0356	0407	1649R	B		042314	W073.2	0414	0539	1650R	B	
1649	0414	0454	1650R	B	1S			0557	0736	1651A	B	
1650	0558	0642	1651A	B		061030	W100.1	0741	0922	1652A	B	
1651	0730	0736	1651A	B		075747	W126.9	0926	1110	1653A	B	
1651	0742	0829	1652A	B				1114	1253	1654A	B	
1652	0926	1016	1653A	B		094503	W153.7	1259	1440	1655A	B	
1653	1114	1203	1654A	B		113220	E179.5	1445	1623	1656A	B	
1654	1300	1351	1655A	B		131936	E152.7	1627	1806	1657A	B	
1655	1445	1538	1656A	B		150653	E125.8	1812	1951	1658A	B	
1656	1628	1725	1657A	B		165409	E099.0	1956	2139	1659A	B	
1657	1814	1913	1658A	B		184126	E072.2					
1658	2001	2100	1659A	B		202843	E045.4					
1659						221559	E018.6					
1660						000316	W008.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
14 APRIL 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1661						005655	E158.3	1662	0128	0320	1663R	A
1662	0222	0310	1663R	A		024412	E131.5	1663	0319	0507	1663R	B
1663	0409	0458	1663R	B		043128	E104.7	1664	0512	0657	1664R	B
1664	0556	0645	1664R	B		061845	E077.9	1665	0703	0838	1665A	B
1665	0744	0832	1665A	B		080601	E051.1	1666	0842	1025	1666A	B
1666	0931	1020	1666A	B		095318	E024.3	1667	1029	1212	1667A	B
1667	1118	1207	1667A	B		114034	W002.6	1668	1216	1354	1668A	B
1668	1305	1353	1668A	B		132751	W029.4	1669	1358	1537	1669A	B
1669	1453	1538	1669A	B		151508	W056.2	1670	1544	1721	1670A	B
1670	1640	1720	1670A	B		170224	W083.0	1671	1726	1909	1671A	B
1671	1827	1905	1671A	B	1N	184941	W109.8	1672	1911	2051	1672A	B
1672	2014	2050	1672A	B		203657	W136.7	1673	2056	2242	1673A	B
1672	2056	2103	1673A	B								
1673	2202	2241	1673A	B		222414	W163.5					
1673	2243	2251	1676R	A								
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1661	0128	0222	1663R	A		015032	W035.1		0127	0319	1663R	A
1662	0310	0318	1663R	A		033749	W061.9		0319	0507	1663R	B
1662	0320	0409	1663R	B					0513	0657	1664R	B
1663	0458	0505	1663R	B		052505	W088.7		0703	0838	1665A	B
1663	0513	0556	1664R	B					0843	1025	1666A	B
1664	0645	0657	1664R	B		071222	W115.5		1029	1211	1667A	B
1664	0703	0744	1665A	B					1216	1354	1668A	B
1665	0832	0837	1665A	B		085938	W142.4		1358	1537	1669A	B
1665	0843	0931	1666A	B					1544	1721	1670A	B
1666	1029	1118	1667A	B		104655	W169.2		1726	1906	1671A	B
1667	1217	1305	1668A	B		123412	E164.0		1911	2051	1672A	B
1668	1359	1453	1669A	B		142128	E137.2		2056	2242	1673A	B
1669	1544	1640	1670A	B		160845	E110.4		2243	0045	1676R	A
1670	1729	1827	1671A	B	1S	175601	E083.6					
1671	1916	2014	1672A	B		194318	E056.8					
1672	2103	2202	1673A	B		213034	E029.9					
1673	2251	2349	1676R	A		231751	E003.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
15 APRIL 1973

THIR						ASC. AND		ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1674	2349	0038	1676R	A		001130	E169.7	1674	2242	0045	1676R	A
1675						015847	E142.9	1676	0240	0423	1676R	B
1676	0324	0412	1676R	B		034603	E116.1	1677	0428	0605	1677R	B
1677	0511	0600	1677R	B		053320	E089.2	1678	0614	0754	1678A	B
1678	0658	0747	1678A	B		072037	E062.4	1679	0759	0940	1679A	B
1679	0845	0934	1679A	B		090753	E035.6	1680	0944	1125	1680A	B
1680	1033	1122	1680A	B		105510	E008.8	1681	1130	1310	1681A	B
1681	1220	1309	1681A	B		124226	W018.1	1682	1315	1455	1682A	B
1682	1407	1454	1682A	B		142943	W044.9	1683	1500	1635	1683A	B
1683	1555	1637	1683A	B		161659	W071.7	1684	1642	1822	1684A	B
1684	1742	1822	1684A	B		180416	W098.5	1685	1828	2008	1685A	B
1685	1929	2007	1685A	B		195132	W125.4	1686	2013	2154	1686A	B
1685	2013	2015	1686A	B								
1686	2116	2153	1686A	B		213849	W152.2					
1687						232605	W179.0					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1674	0038	0044	1676R	A		010507	W023.7	0240	0423	1676R	B	
1675	0240	0324	1676R	B		025224	W050.5	0428	0605	1677R	B	
1676	0412	0422	1676R	B		043940	W077.3	0759	0940	1679A	B	
1676	0428	0511	1677R	B				0945	1125	1680A	B	
1677	0600	0605	1677R	B		062657	W104.2	1130	1311	1681A	B	
1677	0614	0658	1678A	B				1315	1455	1682A	B	
1678	0747	0754	1678A	B		081414	W131.0	1500	1635	1683A	B	
1678	0759	0845	1679A	B				1643	1822	1684A	B	
1679	0945	1033	1680A	B		100130	W157.8	1828	2008	1685A	B	
1680	1130	1220	1681A	B		114847	E175.3	2013	2154	1686A	B	
1681	1315	1407	1682A	B		133603	E148.5					
1682	1500	1555	1683A	B		152320	E121.7					
1683	1643	1742	1684A	B		171036	E094.9					
1684	1831	1929	1685A	B		185753	E068.1					
1685	2018	2116	1686A	B		204509	E041.3					
1686						223226	E014.4					
1687						001943	W012.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
16 APRIL 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1688						011322	E154.2	1689	0144	0344	1690R	A
1689	0238	0327	1690R	A		030039	E127.4	1690	0343	0523	1690R	B
1690	0426	0514	1690R	B		044755	E100.6	1691	0528	0714	1691R	B
1691	0613	0702	1691A	B	1E	063512	E073.7	1692	0719	0855	1692A	B
1692	0800	0849	1692A	B		082228	E046.9	1693	0859	1040	1693A	B
1693	0947	1036	1693A	B		100945	E020.1	1694	1045	1226	1694A	B
1694	1135	1223	1694A	B		115701	W006.7	1695	1231	1410	1695A	B
1695	1322	1409	1695A	B		134418	W033.5	1696	1415	1554	1696A	B
1696	1509	1555	1696A	B		153134	W060.4	1697	1600	1740	1697A	B
1697	1657	1739	1697A	B		171851	W087.2	1698	1745	1924	1698A	B
1698	1844	1923	1698A	B		190607	W114.0	1699	1930	2113	1699A	B
1699	2031	2111	1699A	B		205324	W140.8	1700	2118	2300	1700A	B
1700	2218	2259	1700A	B		224040	W167.6					
1700	2256	2307	1703R	A								
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1688	0145	0238	1690R	A		020659	W039.2	0145	0343	1690R	A	
1689	0327	0343	1690R	A		035416	W066.0	0343	0523	1690R	B	
1689	0343	0426	1690R	B				0528	0714	1691R	B	
1690	0528	0613	1691A	B	1W	054132	W092.9	0719	0855	1692A	B	
1691	0702	0713	1691A	B	1W	072849	W119.7	0859	1040	1693A	B	
1691	0719	0800	1692A	B				1045	1226	1694A	B	
1692	0849	0854	1692A	B		091605	W146.5	1231	1410	1695A	B	
1692	0900	0947	1693A	B				1415	1554	1696A	B	
1693	1045	1135	1694A	B		110322	W173.3	1600	1740	1697A	B	
1694	1231	1322	1695A	B		125038	E159.9	1745	1923	1698A	B	
1695	1415	1509	1696A	B		143755	E133.1	1930	2112	1699A	B	
1696	1601	1657	1697A	B		162511	E106.2	2118	2259	1700A	B	
1697	1745	1844	1698A	B		181228	E079.4	2256	0058	1703R	A	
1698	1933	2031	1699A	B		195945	E052.6					
1699	2120	2218	1700A	B		214701	E025.8					
1700	2307	0006	1703R	A		233418	W001.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
17 APRIL 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
1701	0006	0054	1703R	A		002757	E165.6	1701	2259	0058	1703R	A
1702						021514	E138.7	1703	0253	0439	1703R	B
1703	0340	0429	1703R	B	1N	040230	E111.9	1704	0444	0609	1704R	B
1704	0528	0616	1704R	B	1N	054947	E085.1	1705	0630	0808	1705A	B
1705	0715	0804	1705A	B		073703	E058.3	1706	0813	0956	1706A	B
1706	0902	0951	1706A	B		092420	E031.5	1707	1001	1141	1707A	B
1707	1049	1138	1707A	B		111136	E004.6	1708	1145	1328	1708A	B
1708	1237	1325	1708A	B		125853	W022.2	1709	1332	1511	1709A	B
1709	1424	1510	1709A	B		144609	W049.0	1710	1516	1656	1710A	B
1710	1611	1655	1710A	B		163326	W075.8	1711	1700	1837	1711A	B
1711	1759	1837	1711A	B		182042	W102.6	1712	1843	2024	1712A	B
1712	1946	2023	1712A	B		200759	W129.5	1713	2029	2211	1713A	B
1712	2029	2035	1713A	B								
1713	2133	2210	1713A	B		215516	W156.3					
1714						234232	E176.9					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1701						012134	W027.9	0253	0439	1703R	B	
1702	0254	0340	1703R	B	1S	030851	W054.7	0444	0609	1704R	B	
1703	0429	0437	1703R	B	1S	045607	W081.5	0631	0808	1705A	B	
1703	0444	0528	1704R	B	1S			0813	0956	1706A	B	
1704	0616	0625	1704R	B	1S	064324	W108.3	1001	1140	1707A	B	
1704	0631	0715	1705A	B				1145	1327	1708A	B	
1705	0813	0902	1706A	B		083040	W135.1	1332	1511	1709A	B	
1706	1001	1049	1707A	B		101757	W162.0	1551	1655	1710A	B	
1707	1145	1237	1708A	B		120513	E171.2	1700	1837	1711A	B	
1708	1332	1424	1709A	B		135230	E144.4	1843	2024	1712A	B	
1709	1516	1611	1710A	B		153947	E117.6	2029	2211	1713A	B	
1710	1701	1759	1711A	B		172703	E090.8					
1711	1847	1946	1712A	B		191420	E064.0					
1712	2035	2133	1713A	B		210136	E037.1					
1713						224853	E010.3					
1714	0015	0108	1717R	A		003609	W016.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
18 APRIL 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1715	0108	0156	1717R	A		012949	E150.1	1715	0015	0203	1717R	A
1716	0255	0344	1716R	B		031705	E123.3	1716	0201	0357	1716R	B
1717	0442	0531	1717R	B		050422	E096.5	1717	0403	0540	1717R	B
1718	0630	0718	1718A	B		065138	E069.6	1718	0545	0725	1718A	B
1719	0817	0906	1719A	B		083855	E042.8	1719	0730	0910	1719A	B
1720	1004	1053	1720A	B		102611	E016.0	1720	0914	1055	1720A	B
1721	1151	1240	1721A	B		121328	W010.8	1721	1100	1241	1721A	B
1722	1339	1427	1722A	B		140044	W037.7	1722	1246	1429	1722A	B
1723	1526	1609	1723A	B		154801	W064.5	1723	1434	1611	1723A	B
1724	1713	1755	1724A	B		173518	W091.3	1724	1615	1756	1724A	B
1725	1901	1940	1725A	B		192234	W118.1	1725	1801	1940	1725A	B
1726	2048	2121	1726A	B		210951	W144.9	1726	1946	2124	1726A	B
1726	2131	2137	1727A	B				1727	2130	2316	1727A	B
1727	2235	2315	1727A	B		225707	W171.7					
1727	2317	2324	1730R	A								
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1715	0156	0203	1717R	A		022326	W043.3	0015	0203	1717R	A	
1715	0201	0255	1716R	B				0202	0357	1716R	B	
1716	0344	0357	1716R	B		041042	W070.1	0403	0541	1717R	B	
1716	0403	0442	1717R	B				0545	0725	1718A	B	
1717	0531	0540	1717R	B		055759	W097.0	0730	0910	1719A	B	
1717	0545	0630	1718A	B				0914	1055	1720A	B	
1718	0718	0724	1718A	B		074516	W123.8	1100	1241	1721A	B	
1718	0730	0817	1719A	B				1246	1429	1722A	B	
1719	0914	1004	1720A	B		093232	W150.6	1434	1610	1723A	B	
1720	1100	1151	1721A	B		111949	W177.4	1615	1756	1724A	B	
1721	1246	1339	1722A	B		130705	E155.8	1801	1940	1725A	B	
1722	1434	1526	1723A	B		145422	E129.0	1946	2123	1726A	B	
1723	1616	1713	1724A	B		164138	E102.1	2130	2316	1727A	B	
1724	1802	1901	1725A	B		182855	E075.3	2317	0115	1730R	A	
1725	1949	2048	1726A	B		201611	E048.5					
1726	2137	2235	1727A	B		220328	E021.7					
1727	2324	0022	1730R	A		235044	W005.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
19 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1728	0022	0111	1730R	A		004424	E161.4	1728	2317	0116	1730R	A
1729						023140	E134.6	1730	0308	0456	1730R	B
1730	0357	0446	1730R	B		041857	E107.8	1731	0500	0643	1731R	B
1731	0544	0633	1731R	B		060613	E081.0	1732	0647	0825	1732A	B
1732	0732	0820	1732A	B	1W	075330	E054.2	1733	0830	1011	1733A	B
1733	0919	1008	1733A	B		094046	E027.3	1734	1016	1156	1734A	B
1734	1106	1155	1734A	B		112803	E000.5	1735	1202	1345	1735A	B
1735	1253	1342	1735A	B		131520	W026.3	1736	1349	1528	1736A	B
1736	1441	1526	1736A	B		150236	W053.1	1737	1532	1710	1737A	B
1737	1628	1709	1737A	B		164953	W079.9	1738	1715	1856	1738A	B
1738	1815	1854	1738A	B		183709	W106.8	1739	1900	2041	1739A	B
1739	2002	2039	1739A	B		202426	W133.6	1740	2046	2230	1740A	B
1740	2150	2229	1740A	B		221142	W160.4					
1741						235859	E172.8					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1728						013801	W032.0		0309	0455	1730R	B
1729	0308	0357	1730R	B		032518	W058.8		0500	0642	1731R	B
1730	0446	0455	1730R	B		051234	W085.6		0647	0825	1732A	B
1730	0500	0544	1731R	B					0830	1011	1733A	B
1731	0633	0642	1731R	B	1E	065951	W112.4		1016	1156	1734A	B
1731	0647	0732	1732A	B					1202	1345	1735A	B
1732	0830	0919	1733A	B		084707	W139.2		1349	1527	1736A	B
1733	1016	1106	1734A	B		103424	W166.1		1532	1710	1737A	B
1734	1202	1253	1735A	B		122140	E167.1		1715	1855	1738A	B
1735	1349	1441	1736A	B		140857	E140.3		1900	2041	1739A	B
1736	1532	1628	1737A	B		155613	E113.5		2046	2230	1740A	B
1737	1717	1815	1738A	B		174330	E086.7					
1738	1904	2002	1739A	B		193046	E059.8					
1739	2051	2150	1740A	B		211803	E033.0					
1740						230520	E006.2					
1741	0031	0124	1743R	A		005236	W020.6					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
20 APRIL 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1742	0124	0213	1743R	A		014615	E146.0	1742	0031	0227	1743R	A
1743	0312	0400	1743R	B		033332	E119.2	1743	0227	0412	1743R	B
1744	0459	0546	1744R	B		052048	E092.3	1744	0416	0547	1744R	B
1745	0646	0735	1745A	B		070805	E065.5	1745	0601	0740	1745A	B
1746	0833	0922	1746A	B		085522	E038.7	1746	0745	0926	1746A	B
1747	1021	1110	1747A	B		104238	E011.9	1747	0931	1113	1747A	B
1748	1208	1257	1748A	B		122955	W014.9	1748	1117	1258	1748A	B
1749	1355	1443	1749A	B		141711	W041.8	1749	1303	1444	1749A	B
1750	1543	1627	1750A	B		160428	W068.6	1750	1449	1629	1750A	B
1751	1730	1811	1751A	B		175144	W095.4	1751	1633	1811	1751A	B
1751	1814	1819	1752A	B				1752	1816	1956	1752A	B
1752	1917	1952	1752A	B		193901	W122.2	1753	2001	2144	1753A	B
1753	2104	2143	1753A	B		212617	W149.0	1754	2145	2344	1757R	A
1753	2145	2153	1757R	A								
1754	2252	2341	1757R	A		231334	W175.9					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1742	0213	0225	1743R	A		023953	W047.4		0031	0226	1743R	A
1742	0226	0312	1743R	B					0226	0411	1743R	B
1743	0400	0411	1743R	B		042709	W074.3		0417	0547	1745A	B
1743	0417	0459	1744R	B					0601	0739	1744R	B
1744	0601	0646	1745A	B		061426	W101.1		0745	0926	1746A	B
1745	0745	0833	1746A	B		080142	W127.9		0931	1113	1747A	B
1746	0931	1021	1747A	B		094859	W154.7		1117	1258	1748A	B
1747	1117	1208	1748A	B		113615	E178.5		1303	1444	1749A	B
1748	1303	1355	1749A	B		132332	E151.7		1449	1629	1750A	B
1749	1450	1543	1750A	B		151048	E124.8		1633	1811	1751A	B
1750	1633	1730	1751A	B		165805	E098.0		1817	1956	1752A	B
1751	1819	1917	1752A	B		184522	E071.2		2001	2144	1753A	B
1752	2006	2104	1753A	B		203238	E044.4		2145	2344	1757R	A
1753	2153	2252	1757R	A		221955	E017.6					
1754						000711	W009.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
21 APRIL 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1755						010050	E157.3	1757	0323	0512	1757R	B
1756						024807	E130.5	1758	0517	0659	1758R	B
1757	0414	0502	1757R	B		043524	E103.7	1759	0704	0841	1759A	B
1758	0601	0650	1758R	B		062240	E076.9	1760	0845	1028	1760A	B
1759	0748	0837	1759A	B		080957	E050.1	1761	1033	1215	1761A	B
1760	0935	1024	1760A	B		095713	E023.2	1762	1220	1400	1762A	B
1761	1123	1211	1761A	B		114430	W003.6	1763	1404	1543	1763A	B
1762	1310	1358	1762A	B		133146	W030.4	1764	1547	1730	1764A	B
1763	1457	1542	1763A	B		151903	W057.2	1765	1734	1912	1765A	B
1764	1645	1729	1764A	B		170619	W084.1	1766	1917	2100	1766A	B
1765	1832	1911	1765A	B		185336	W110.9	1767	2104	2243	1767A	B
1766	2019	2058	1766A	B		204052	W137.7					
1767	2206	2242	1767A	B		222809	W164.5					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1755						015428	W036.1	0323	0511	1757R	B	
1756	0323	0414	1757R	B		034144	W062.9	0517	0659	1758R	B	
1757	0502	0511	1757R	B		052901	W089.7	0704	0841	1759A	B	
1757	0517	0601	1758R	B				0845	1027	1760A	B	
1758	0650	0658	1758R	B		071617	W116.5	1033	1215	1761A	B	
1758	0704	0748	1759A	B				1220	1400	1762A	B	
1759	0846	0935	1760A	B		090334	W143.4	1404	1543	1763A	B	
1760	1033	1123	1761A	B		105051	W170.2	1547	1729	1764A	B	
1761	1220	1310	1762A	B		123807	E163.0	1734	1911	1765A	B	
1762	1404	1457	1763A	B		142524	E136.2	1917	2059	1766A	B	
1763	1548	1645	1764A	B		161240	E109.4	2104	2243	1767A	B	
1764	1734	1832	1765A	B		175957	E082.6					
1765	1921	2019	1766A	B		194713	E055.7					
1766	2108	2206	1767A	B		213430	E028.9					
1767						232146	E002.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
22 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1768						001526	E168.7	1769	0046	0243	1773A	A
1769	0141	0230	1773A	A		020242	E141.9	1772	0620	0757	1772A	B
1770						034959	E115.0	1773	0801	0941	1773A	B
1771						053715	E088.2	1774	0946	1129	1774A	B
1772	0703	0752	1772A	B		072432	E061.4	1775	1134	1315	1775A	B
1773	0850	0938	1773A	B		091148	E034.6	1776	1320	1459	1776A	B
1774	1037	1126	1774A	B		105905	E007.8	1777	1504	1641	1777A	B
1775	1225	1313	1775A	B		124621	W019.1	1778	1646	1825	1778A	B
1776	1412	1458	1776A	B	4S	143338	W045.9	1779	1830	2011	1779A	B
1777	1559	1641	1777A	B		162054	W072.7	1780	2016	2202	1780A	B
1778	1747	1825	1778A	B	2N	180811	W099.5	1781	2202	0001	1784R	A
1778	1830	1835	1779A	B								
1779	1934	2010	1779A	B		195528	W126.3					
1779	2016	2023	1780A	B								
1780	2121	2200	1780A	B		214244	W153.2					
1780	2202	2210	1784R	A								
1781	2308	2357	1784R	A		233001	180.0					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1768	0045	0141	1773A	A		010903	W024.7		0046	0243	1773A	A
1769	0230	0241	1773A	A		025619	W051.6		0620	0757	1772A	B
1770						044336	W078.4		0801	0941	1773A	B
1771	0620	0703	1772A	B		063053	W105.2		0945	1129	1774A	A
1772	0802	0850	1773A	B		081809	W132.0		1134	1315	1775A	B
1773	0945	1037	1774A	B		100526	W158.8		1320	1459	1776A	B
1774	1134	1225	1775A	B		115242	E174.4		1504	1641	1777A	B
1775	1320	1412	1776A	B	4N	133959	E147.5		1646	1825	1778A	B
1776	1504	1559	1777A	B		152715	E120.7		1828	2011	1779A	B
1777	1648	1747	1778A	B	2S	171432	E093.9		2016	2202	1780A	B
1778	1835	1934	1779A	B		190148	E067.1		2202	0000	1784R	A
1779	2023	2121	1780A	B		204905	E040.3					
1780			1784R	A		223621	E013.5					
1781						002338	W013.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
23 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1782						011717	E153.2	1783	0149	0346	1783R	B
1783	0243	0332	1783R	B		030434	E126.4	1784	0351	0527	1784R	B
1784	0430	0519	1784R	B		045150	E099.6	1785	0532	0718	1785R	B
1785	0618	0706	1785R	B		063907	E072.8	1786	0723	0845	1786A	B
1786	0805	0854	1786A	B		082623	E045.9	1787	0901	1043	1787A	B
1787	0952	1041	1787A	B	4W	101340	E019.1	1788	1048	1228	1788A	B
1788	1139	1228	1788A	B		120056	W007.7	1789	1233	1415	1789A	B
1789	1327	1414	1789A	B		134813	W034.5	1790	1421	1559	1790A	B
1790	1514	1557	1790A	B		153530	W061.3	1791	1603	1743	1791A	B
1791	1701	1742	1791A	B		172246	W088.2	1792	1748	1929	1792A	B
1792	1849	1928	1792A	B		191003	W115.0	1793	1933	2115	1793A	B
1793	2036	2113	1793A	B	1E	205719	W141.8	1794	2119	2300	1794A	B
1793	2119	2125	1794A	B								
1794	2223	2300	1794A	B		224436	W168.6					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1782	0148	0243	1783R	B		021055	W040.2		0149	0345	1783R	B
1783	0332	0344	1783R	B		035811	W067.0		0351	0527	1784R	B
1783	0351	0430	1784R	B					0532	0718	1785R	B
1784	0519	0526	1784R	B		054528	W093.8		0723	0857	1786A	B
1784	0532	0618	1785R	B					0901	1043	1787A	B
1785	0706	0717	1785R	B		073244	W120.7		1048	1228	1788A	B
1785	0723	0805	1786A	B					1233	1415	1789A	B
1786	0901	0952	1787A	B	4E	092001	W147.5		1421	1558	1790A	B
1787	1048	1139	1788A	B		110717	W174.3		1603	1743	1791A	B
1788	1233	1327	1789A	B		125434	E158.9		1748	1929	1792A	B
1789	1421	1514	1790A	B		144150	E132.1		1934	2114	1793A	B
1790	1603	1701	1791A	B		162907	E105.3		2119	2300	1794A	B
1791	1750	1849	1792A	B		181623	E078.4					
1792	1937	2036	1793A	B		200340	E051.6					
1793	2125	2223	1794A	B		215057	E024.8					
1794						233813	W002.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
24 APRIL 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
1795						003152	E164.6	1796	0103	0257	1798R	A
1796	0158	0246	1798R	A		021909	E137.8	1797	0257	0443	1797R	B
1797	0345	0434	1797R	B		040625	E110.9	1798	0448	0629	1798R	B
1798	0532	0621	1798R	B		055342	E084.1	1799	0634	0812	1799A	B
1799	0719	0808	1799A	B		074058	E057.3	1800	0817	0959	1800A	B
1800	0907	0956	1800A	B		092815	E030.5	1801	1003	1145	1801A	B
1801	1054	1143	1801A	B		111532	E003.7	1802	1150	1331	1802A	B
1802	1241	1330	1802A	B		130248	W023.2	1803	1336	1516	1803A	B
1803	1429	1513	1803A	B		145005	W050.0	1804	1520	1659	1804A	B
1804	1616	1657	1804A	B		163721	W076.8	1805	1703	1843	1805A	B
1805	1803	1842	1805A	B		182438	W103.6	1806	1847	2028	1806A	B
1806	1950	2028	1806A	B		201154	W130.4	1807	2033	2217	1807A	B
1806	2033	2039	1807A	B	1S1E							
1807	2138	2216	1807A	B		215911	W157.3	1808	2218	0018	1811R	A
1807	2217	2227	1811R	A								
1808	2325	0014	1811R	A		234627	E175.9					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1795	0104	0158	1798R	A		012530	W028.8		0103	0257	1798R	A
1796	0246	0256	1798R	A		031246	W055.7		0257	0443	1797R	B
1796	0258	0345	1797R	B					0448	0629	1798R	B
1797	0434	0442	1797R	B		050003	W082.5		0634	0813	1799A	B
1797	0448	0532	1798R	B					0817	0959	1800A	B
1798	0621	0628	1798R	B		064719	W109.3		1003	1145	1801A	B
1798	0635	0719	1799A	B					1150	1331	1802A	B
1799	0817	0907	1800A	B		083436	W136.1		1336	1515	1803A	B
1800	1004	1054	1801A	B		102152	W162.9		1520	1659	1804A	B
1801	1150	1241	1802A	B		120909	E170.3		1703	1843	1805A	B
1802	1336	1429	1803A	B		135625	E143.4		1847	2028	1806A	B
1803	1520	1616	1804A	B		154342	E116.6		2033	2217	1807A	B
1804	1705	1803	1805A	B		173059	E089.8		2218	0018	1811R	A
1805	1852	1950	1806A	B		191815	E063.0					
1806	2039	2138	1807A	B		210532	E036.2					
1807	2227	2325	1811R	A		225248	E009.3					
1808						004005	W017.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
25 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1809						013344	E149.1	1810	0204	0402	1810R	B
1810	0300	0348	1810R	B		032100	E122.3	1811	0407	0544	1811R	B
1811	0447	0536	1811R	B		050817	E095.5	1812	0549	0728	1812A	B
1812	0634	0723	1812A	B		065534	E068.7	1813	0733	0914	1813A	B
1813	0821	0910	1813A	B		084250	E041.8	1814	0919	1101	1814A	B
1814	1009	1057	1814A	B	2N	103007	E015.0	1815	1106	1246	1815A	B
1815	1156	1245	1815A	B		121723	W011.8	1816	1251	1432	1816A	B
1816	1343	1431	1816A	B		140440	W038.6	1817	1436	1615	1817A	B
1817	1531	1612	1817A	B		155156	W065.5	1818	1620	1758	1818A	B
1818	1718	1757	1818A	B		173913	W092.3	1819	1803	1945	1819A	B
1819	1905	1944	1819A	B		192629	W119.1	1820	1952	2129	1820A	B
1820	2052	2128	1820A	B		211346	W145.9	1821	2133	2316	1821A	B
1820	2133	2141	1821A	B								
1821	2240	2316	1821A	B		230102	W172.7					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1809	0204	0300	1810R	B		022721	W044.3		0205	0402	1810R	B
1810	0348	0401	1810R	B		041438	W071.1		0407	0544	1811R	B
1810	0407	0447	1811R	B					0549	0728	1812A	B
1811	0549	0634	1812A	B		060154	W097.9		0733	0914	1813A	B
1812	0733	0821	1813A	B		074911	W124.8		0919	1101	1814A	B
1813	0919	1009	1814A	B		093627	W151.6		1106	1246	1815A	B
1814	1105	1156	1815A	B	2S	112344	W178.4		1251	1432	1816A	B
1815	1251	1343	1816A	B		131101	E154.8		1437	1615	1817A	B
1816	1436	1531	1817A	B	2N	145817	E128.0		1619	1758	1818A	B
1817	1620	1718	1818A	B		164534	E101.1		1804	1945	1819A	B
1818	1807	1905	1819A	B		183250	E074.3		1952	2129	1820A	B
1819	1954	2052	1820A	B		202007	E047.5		2133	2316	1821A	B
1820	2141	2240	1821A	B		220723	E020.7					
1821						235440	W006.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
26 APRIL 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1822						004819	E160.5	1823	0119	0312	1824R	A
1823	0214	0303	1824R	A		023535	E133.6	1824	0312	0459	1824R	B
1824	0402	0450	1824R	B		042252	E106.8	1825	0504	0646	1825R	B
1825	0549	0638	1825R	B		061009	E080.0	1826	0652	0829	1826A	B
1826	0736	0825	1826A	B	2E	075725	E053.2	1827	0834	1013	1827A	B
1827	0923	1012	1827A	B		094442	E026.4	1828	1019	1203	1828A	B
1828	1111	1157	1828A	B		113158	W000.5	1829	1208	1348	1829A	B
1829	1258	1346	1829A	B		131915	W027.3	1830	1353	1532	1830A	B
1830	1445	1530	1830A	B		150631	W054.1	1831	1536	1715	1831A	B
1831	1633	1655	1831A	B		165348	W080.9	1832	1720	1854	1832A	B
1831	1650	1714	1831A	B				1833	1903	2043	1833A	B
1832	1820	1856	1832A	B		184104	W107.7	1834	2050	2235	1834A	B
1832	1903	1909	1833A	B								
1833	2007	2043	1833A	B		202821	W134.6					
1833	2050	2056	1834A	B								
1834	2154	2234	1834A	B		221538	W161.4					
1834	2234	2243	1838R	A								
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1822	0020	0214	1824R	A		014156	W033.0		0119	0312	1824R	A
1823	0303	0311	1824R	A		032913	W059.8		0313	0459	1824R	B
1823	0312	0402	1824R	B					0504	0647	1825R	B
1824	0450	0458	1824R	B		051629	W086.6		0652	0830	1826A	B
1824	0504	0549	1825R	B					0834	1013	1827A	B
1825	0638	0646	1825R	B		070346	W113.4		1019	1203	1828A	B
1825	0652	0736	1826A	B	2W				1208	1347	1829A	B
1826	0834	0923	1827A	B		085103	W140.2		1353	1531	1830A	B
1827	1019	1111	1828A	B		103819	W167.1		1536	1715	1831A	B
1828	1208	1258	1829A	B		122536	E166.1		1719	1854	1832A	B
1829	1353	1445	1830A	B		141252	E139.3		1903	2043	1833A	B
1830	1536	1633	1831A	B		160009	E112.5		2050	2235	1834A	B
1831	1721	1820	1832A	B		174725	E085.7		2235	0033	1838R	A
1832	1909	2007	1833A	B		193442	E058.9					
1833	2056	2154	1834A	B		212158	E032.0					
1834	2243	2342	1838R	A		230915	E005.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
27 APRIL 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1835	2342	0030	1838R	A		000254	E171.8	1835	2235	0033	1838R	A
1836						015011	E145.0	1837	0230	0415	1837R	B
1837	0316	0405	1837R	B		033727	E118.2	1838	0420	0544	1838R	B
1838	0504	0546	1838R	B		052444	E091.4	1839	0605	0742	1839A	B
1839	0651	0736	1839A	B		071200	E064.5	1840	0747	0933	1840A	B
1840	0838	0927	1840A	B		085917	E037.7	1841	0937	1116	1841A	B
1841	1025	1115	1841A	B		104633	E010.9	1842	1120	1301	1842A	B
1842	1213	1300	1842A	B		123350	W015.9	1843	1306	1446	1843A	B
1843	1400	1445	1843A	B		142106	W042.7	1844	1451	1630	1844A	B
1844	1547	1629	1844A	B		160823	W069.6	1845	1636	1813	1845A	B
1845	1735	1812	1845A	B		175540	W096.4	1846	1817	2000	1846A	B
1845	1818	1823	1846A	B				1847	2005	2146	1847A	B
1846	1922	1959	1846A	B		194256	W123.2					
1846	2005	2011	1847A	B								
1847	2109	2144	1847A	B		213013	W150.0					
1848						231729	W176.8					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1835						005631	W021.6		0230	0415	1837R	B
1836	0246	0316	1837R	B		024348	W048.4		0420	0543	1838R	B
1837	0405	0414	1837R	B		043104	W075.2		0605	0742	1839A	B
1837	0420	0504	1838R	B					0747	0933	1840A	B
1838	0605	0651	1839A	B		061821	W102.1		0937	1116	1841A	B
1839	0747	0838	1840A	B		080538	W128.9		1121	1301	1842A	B
1840	0937	1025	1841A	B		095254	W155.7		1306	1446	1843A	B
1841	1121	1213	1842A	B		114011	E177.5		1451	1630	1844A	B
1842	1306	1400	1843A	B		132727	E150.7		1636	1813	1845A	B
1843	1451	1547	1844A	B		151444	E123.9		1818	2000	1846A	B
1844	1636	1735	1845A	B		170200	E097.0		2005	2146	1847A	B
1845	1823	1922	1846A	B		184917	E070.2					
1846	2011	2109	1847A	B		203633	E043.4					
1847						222350	E016.6					
1848						001106	W010.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
28 APRIL 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1849						010446	E156.3	1850	0136	0325	1851R	A
1850	0231	0320	1851A	A		025202	E129.5	1851	0325	0516	1851R	B
1851	0418	0507	1851R	B	1E	043919	E102.7	1852	0521	0705	1852R	B
1852	0605	0654	1852R	B		062635	E075.9	1853	0710	0844	1853A	B
1853	0753	0842	1853A	B		081352	E049.1	1854	0849	1030	1854A	B
1854	0940	1028	1854A	B	2W	100108	E022.3	1855	1035	1219	1855A	B
1855	1127	1216	1855A	B		114825	W004.6	1856	1223	1403	1856A	B
1856	1315	1400	1856A	B		133541	W031.4	1857	1407	1546	1857A	B
1857	1502	1545	1857A	B		152258	W058.2	1858	1551	1728	1858A	B
1858	1649	1729	1858A	B		171015	W085.0	1859	1734	1915	1859A	B
1859	1836	1914	1859A	B		185731	W111.9	1860	1920	2059	1860A	B
1859	1920	1925	1860A	B				1861	2104	2250	1861A	B
1860	2024	2059	1860A	B		204448	W138.7					
1860	2104	2113	1861A	B								
1861	2211	2249	1861A	B		223204	W165.5					
1861	2251	2300	1864R	A								
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1849	0136	0231	1851A	A		015823	W037.1	0135	0325	1851R	A	
1850	0325	0418	1851R	B	1W	034540	W063.9	0325	0513	1851R	B	
1851	0507	0515	1851R	B	1W	053256	W090.7	0521	0705	1852R	B	
1851	0521	0605	1852R	B				0710	0845	1853A	B	
1852	0654	0704	1852R	B		072013	W117.5	0849	1030	1854A	B	
1852	0710	0753	1853A	B				1034	1219	1855A	B	
1853	0849	0940	1854A	B	2E	090729	W144.3	1223	1403	1856A	B	
1854	1034	1127	1855A	B		105446	W171.2	1407	1546	1857A	B	
1855	1222	1315	1856A	B		124202	E162.0	1551	1729	1858A	B	
1856	1408	1502	1857A	B		142919	E135.2	1734	1915	1859A	B	
1857	1551	1649	1858A	B		161635	E108.4	1920	2059	1860A	B	
1858	1738	1836	1859A	B		180352	E081.6	2104	2250	1861A	B	
1859	1925	2024	1860A	B		195108	E054.8	2251	0048	1864R	A	
1860	2113	2211	1861A	B		213825	E027.9					
1861	2300	2358	1864R	A		232542	E001.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
29 APRIL 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1862	2358	0047	1864R	A		001921	E167.7	1862	2251	0049	1864R	A
1863						020637	E140.9	1864	0245	0430	1864R	B
1864	0333	0422	1864R	B	1E	035354	E114.1	1865	0436	0617	1865R	B
1865	0520	0609	1865R	B		054110	E087.2	1866	0623	0800	1866A	B
1866	0707	0756	1866A	B		072827	E060.4	1867	0806	0947	1867A	B
1867	0855	0943	1867A	B		091543	E033.6	1868	0952	1133	1868A	B
1868	1042	1131	1868A	B		110300	E006.8	1869	1137	1319	1869A	B
1869	1229	1318	1869A	B		125017	W020.0	1870	1324	1504	1870A	B
1870	1417	1502	1870A	B		143733	W046.9	1871	1509	1644	1871A	B
1871	1604	1644	1871A	B		162450	W073.7	1872	1649	1829	1872A	B
1872	1751	1828	1872A	B		181206	W100.5	1873	1834	2017	1873A	B
1872	1834	1840	1873A	B				1874	2022	2203	1874A	B
1873	1938	2014	1873A	B		195923	W127.3					
1873	2022	2027	1874A	B								
1874	2126	2202	1874A	B		214639	W154.1					
1875						233356	E179.1					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1862						011258	W025.7	0245	0430	1864R	B	
1863	0246	0333	1864R	B	1W	030015	W052.5	0436	0617	1865R	B	
1864	0422	0428	1864R	B	1W	044731	W079.4	0623	0635	1866A	B	
1864	0436	0520	1865R	B				0806	0947	1867A	B	
1865	0609	0617	1865R	B		063448	W106.2	0952	1133	1868A	B	
1865	0623	0707	1866A	B				1138	1319	1869A	B	
1866	0806	0855	1867A	B		082204	W133.0	1324	1504	1870A	B	
1867	0952	1042	1868A	B		100921	W159.8	1509	1645	1871A	B	
1868	1138	1229	1869A	B		115637	E173.4	1649	1829	1872A	B	
1869	1324	1417	1870A	B		134354	E146.6	1834	2017	1873A	B	
1870	1509	1604	1871A	B		153110	E119.7	2022	2203	1874A	B	
1871	1653	1751	1872A	B		171827	E092.9					
1872	1840	1938	1873A	B		190543	E066.1					
1873	2027	2126	1874A	B		205300	E039.3					
1874						224017	E012.5					
1875	0005	0100	1878R	A		002733	W014.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
30 APRIL 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1876	0100	0149	1878R	A		012112	E152.2	1876	0006	0152	1878R	A
1877	0248	0336	1877R	B		030829	E125.4	1877	0152	0347	1877R	B
1878	0435	0524	1878R	B		045545	E098.6	1878	0354	0531	1878R	B
1879	0622	0711	1879R	B		064302	E071.8	1879	0536	0721	1879R	B
1880	0809	0858	1880A	B		083019	E045.0	1880	0726	0902	1880A	B
1881	0957	1045	1881A	B		101735	E018.1	1881	0906	1047	1881A	B
1882	1144	1223	1882A	B		120452	W008.7	1882	1052	1234	1882A	B
1883	1331	1419	1883A	B		135208	W035.5	1883	1239	1420	1883A	B
1884	1519	1601	1884A	B		153925	W062.3	1884	1425	1602	1884A	B
1885	1706	1744	1885A	B		172641	W089.1	1885	1607	1747	1885A	B
1886	1853	1930	1886A	B		191358	W116.0	1886	1752	1930	1886A	B
1886	1936	1942	1887A	B				1887	1936	2117	1887A	B
1887	2040	2116	1887A	B		210114	W142.8	1888	2122	2307	1888A	B
1887	2122	2129	1888A	B								
1888	2228	2306	1888A	B		224831	W169.6					
1888	2308	2316	1891R	A								
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1876	0153	0248	1877R	B		021450	W041.2		0006	0152	1878R	A
1877	0336	0347	1877R	B		040206	W068.0		0153	0347	1877R	B
1877	0354	0435	1878R	B					0354	0531	1878R	B
1878	0524	0530	1878R	B		054923	W094.8		0536	0720	1879R	B
1878	0536	0622	1879R	B					0726	0902	1880A	B
1879	0711	0720	1879R	B		073639	W121.6		0906	1047	1881A	B
1879	0726	0809	1880A	B					1053	1234	1882A	B
1880	0906	0957	1881A	B		092356	W148.5		1239	1420	1883A	B
1881	1053	1144	1882A	B		111112	W175.3		1431	1602	1884A	B
1882	1239	1331	1883A	B		125829	E157.9		1607	1747	1885A	B
1883	1425	1519	1884A	B		144545	E131.1		1753	1930	1886A	B
1884	1607	1706	1885A	B		163302	E104.3		1936	2117	1887A	B
1885	1755	1853	1886A	B		182019	E077.5		2122	2307	1888A	B
1886	1942	2040	1887A	B		200735	E050.6		2307	0106	1891R	A
1887	2129	2228	1888A	B		215452	E023.8					
1888	2316	0015	1891R	A		234208	W003.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
1 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1889	0015	0104	1891R	A		003547	E163.6	1889	2307	0107	1891R	A
1890						022304	E136.8	1891	0301	0447	1891R	B
1891	0349	0438	1891R	B	1N	041021	E110.0	1892	0452	0620	1892R	B
1892	0537	0626	1892R	B	1N	055737	E083.1	1893	0638	0819	1893A	B
1893	0724	0813	1893A	B		074454	E056.3	1894	0823	1002	1894A	B
1894	0911	1000	1894A	B		093210	E029.5	1895	1006	1148	1895A	B
1895	1059	1147	1895A	B		111927	E002.7	1896	1154	1334	1896A	B
1896	1246	1333	1896A	B	2S1E	130643	W024.1	1897	1339	1519	1897A	B
1897	1433	1517	1897A	B		145400	W051.0	1898	1523	1704	1898A	B
1898	1620	1702	1898A	B	1S	164116	W077.8	1899	1708	1848	1899A	B
1899	1808	1847	1899A	B		182833	W104.6	1900	1852	2033	1900A	B
1900	1955	2031	1900A	B		201549	W131.4	1901	2038	2220	1901A	B
1900	2038	2044	1901A	B								
1901	2142	2219	1901A	B		220306	W158.2					
1902						235022	E175.0					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1889						012925	W029.8	0301	0447	1891R	B	
1890	0301	0349	1891R	B	1S	031641	W056.6	0452	0633	1892R	B	
1891	0438	0447	1891R	B	1S	050358	W083.5	0638	0818	1893A	B	
1891	0453	0537	1892R	B	1S			0823	1002	1894A	B	
1892	0626	0633	1892R	B	1S	065114	W110.3	1006	1148	1895A	B	
1892	0639	0724	1893A	B				1154	1334	1896A	B	
1893	0823	0911	1894A	B		083831	W137.1	1339	1519	1897A	B	
1894	1006	1059	1895A	B		102547	W163.9	1523	1704	1898A	B	
1895	1153	1246	1896A	B	2N1W	121304	E169.3	1709	1848	1899A	B	
1896	1339	1433	1897A	B		140020	E142.5	1853	2033	1900A	B	
1897	1523	1620	1898A	B	1N	154737	E115.6	2038	2220	1901A	B	
1898	1709	1808	1899A	B		173454	E088.8					
1899	1857	1955	1900A	B		192210	E062.0					
1900	2044	2142	1901A	B		210927	E035.2					
1901						225643	E008.4					
1902	0022	0117	1905R	A		004400	W018.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
2 MAY 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1903	0117	0206	1905R	A		013739	E148.1	1903	0021	0218	1905R	A
1904	0304	0353	1904R	B		032456	E121.3	1904	0218	0403	1904R	B
1905	0451	0540	1905R	B	1N	051212	E094.5	1905	0409	0548	1905R	B
1906	0639	0727	1906A	B		065929	E067.7	1906	0553	0732	1906A	B
1907	0826	0915	1907A	B		084645	E040.9	1907	0736	0918	1907A	B
1908	1013	1102	1908A	B		103402	E014.0	1908	0923	1103	1908A	B
1909	1201	1249	1909A	B		122118	W012.8	1909	1108	1251	1909A	B
1910	1348	1434	1910A	B		140835	W039.6	1910	1255	1435	1910A	B
1911	1535	1617	1911A	B		155551	W066.4	1911	1439	1618	1911A	B
1912	1722	1803	1912A	B		174308	W093.2	1912	1622	1804	1912A	B
1913	1910	1947	1913A	B		193024	W120.1	1913	1809	1949	1913A	B
1914	2057	2132	1914A	B		211741	W146.9	1914	1953	2133	1914A	B
1914	2137	2146	1915A	B				1915	2137	2324	1915A	B
1915	2244	2323	1915A	B		230458	W173.7					
1915	2325	2333	1918R	A								
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1903	0206	0217	1905R	A		023116	W045.3	0022	0218	1905R	B	
1903	0218	0304	1904R	B				0218	0403	1904R	B	
1904	0353	0402	1904R	B		041833	W072.1	0408	0547	1905R	A	
1904	0409	0451	1905R	B	1S			0553	0732	1906A	B	
1905	0540	0547	1905R	B	1S	060549	W098.9	0737	0918	1907A	B	
1905	0553	0639	1906A	B				0923	1103	1908A	B	
1906	0737	0826	1907A	B		075306	W125.7	1108	1251	1909A	B	
1907	0923	1013	1908A	B		094022	W152.6	1255	1435	1910A	B	
1908	1108	1201	1909A	B		112739	W179.4	1439	1618	1911A	B	
1909	1256	1348	1910A	B		131456	E153.8	1622	1804	1912A	B	
1910	1439	1535	1911A	B		150212	E127.0	1809	1948	1913A	B	
1911	1624	1722	1912A	B		164929	E100.2	1953	2133	1914A	B	
1912	1811	1910	1913A	B		183645	E073.4	2137	2323	1915A	B	
1913	1958	2057	1914A	B		202402	E046.5	2325	0123	1918R	A	
1914	2146	2244	1915A	B		221118	E019.7					
1915	2333	0032	1918R	A		235835	W007.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
3 MAY 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID	ASC. AND DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR					ASC. NODE						
1916	0032	0120	1918R	A		005214	E159.5	1916	2325	0124	1918R	A
1917						023931	E132.7	1918	0316	0503	1918R	B
1918	0406	0455	1918R	B		042647	E105.8	1919	0509	0651	1919R	B
1919	0553	0642	1919R	B	2S1E	061404	E079.0	1920	0656	0833	1920A	B
1920	0741	0829	1920A	B		080120	E052.2	1921	0838	1017	1921A	B
1921	0928	1017	1921A	B		094837	E025.4	1922	1023	1205	1922A	B
1922	1115	1204	1922A	B		113553	W001.4	1923	1210	1350	1923A	B
1923	1303	1350	1923A	B		132310	W028.3	1924	1356	1535	1924A	B
1924	1450	1534	1924A	B		151026	W055.1	1925	1540	1718	1925A	B
1925	1637	1716	1925A	B	1N	165743	W081.9	1926	1722	1859	1926A	B
1926	1824	1901	1926A	B		184500	W108.7	1927	1908	2047	1927A	B
1926	1907	1913	1927A	B				1928	2052	2136	1928A	B
1927	2012	2046	1927A	B		203216	W135.5					
1927	2052	2100	1928A	B								
1928	2159	2235	1928A	B		221933	W162.4					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1916						014551	W033.9		0315	0503	1918R	B
1917	0315	0406	1918R	B		033308	W060.7		0508	0650	1919R	B
1918	0455	0502	1918R	B		052024	W087.6		0656	0833	1920A	B
1918	0507	0553	1919R	B	2N1W				0838	1018	1921A	B
1919	0642	0648	1919R	B	2N1W	070741	W114.4		1022	1205	1922A	B
1919	0656	0741	1920A	B					1210	1351	1923A	B
1920	0838	0928	1921A	B		085457	W141.2		1355	1535	1924A	B
1921	1022	1115	1922A	B		104214	W168.0		1540	1717	1925A	B
1922	1210	1303	1923A	B		122931	E165.2		1722	1859	1926A	B
1923	1356	1450	1924A	B		141647	E138.3		1907	2047	1927A	B
1924	1540	1637	1925A	B	1S	160404	E111.5		2052	2236	1928A	B
1925	1726	1824	1926A	B		175120	E084.7					
1926	1913	2012	1927A	B		193837	E057.9					
1927	2100	2159	1928A	B		212553	E031.1					
1928						231310	E004.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
4 MAY 1973

THIR							ASC. AND		ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	DESC. TIME HRMNSS	NODE LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1929						000649	E170.8	1930	0039	0234	1931R	A
1930	0133	0222	1931R	A		015406	E144.0	1931	0234	0419	1931R	B
1931	0321	0410	1931R	B		034122	E117.2	1932	0424	0606	1932R	B
1932	0508	0557	1932R	B		052839	E090.4	1933	0610	0747	1933A	B
1933	0655	0744	1933A	B		071555	E063.6	1934	0752	0936	1934A	B
1934	0843	0931	1934A	B		090312	E036.7	1935	0940	1121	1935A	B
1935	1030	1119	1935A	B		105028	E009.9	1936	1125	1306	1936A	B
1936	1217	1304	1936A	B		123745	W016.9	1937	1310	1451	1937A	B
1937	1404	1450	1937A	B		142502	W043.7	1938	1455	1637	1938A	B
1938	1552	1635	1938A	B		161218	W070.5	1939	1641	1819	1939A	B
1939	1739	1818	1939A	B		175935	W097.4	1940	1824	2004	1940A	B
1940	1926	2003	1940A	B		194651	W124.2	1941	2009	2152	1941A	B
1940	2009	2015	1941A	B				1942	2153	2351	1945R	A
1941	2114	2151	1941A	B		213408	W151.0					
1941	2153	2202	1945R	A								
1942	2301	2350	1945R	A		232124	W177.8					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1929	0039	0133	1931R	A		010026	W022.6		0039	0234	1931R	A
1930	0222	0233	1931R	A		024743	W049.4		0234	0419	1931R	B
1930	0235	0321	1931R	B					0424	0605	1932R	B
1931	0410	0418	1931R	B		043459	W076.2		0610	0747	1933A	B
1931	0424	0508	1932R	B					0752	0935	1934A	B
1932	0557	0605	1932R	B		062216	W103.0		0941	1121	1935A	B
1932	0610	0655	1933A	B					1125	1306	1936A	B
1933	0752	0843	1934A	B		080932	W129.9		1310	1451	1937A	B
1934	0941	1030	1935A	B		095649	W156.7		1455	1636	1938A	B
1935	1125	1217	1936A	B		114406	E176.5		1641	1819	1939A	B
1936	1310	1404	1937A	B		133122	E149.7		1824	2004	1940A	B
1937	1455	1552	1938A	B		151839	E122.9		2009	2152	1941A	B
1938	1641	1739	1939A	B		170555	E096.1		2153	2351	1945R	A
1939	1828	1926	1940A	B		185312	E069.2					
1940	2015	2114	1941A	B		204028	E042.4					
1941	2202	2301	1945R	A		222745	E015.6					
1942						001501	W011.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
5 MAY 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1943						010841	E155.4	1945	0329	0521	1945R	B
1944						025557	E128.6	1946	0524	0707	1946R	B
1945	0423	0511	1945R	B		044314	E101.7	1947	0712	0848	1947A	B
1946	0610	0659	1946R	B	1E	063030	E074.9	1948	0852	1035	1948A	B
1947	0757	0846	1947A	B		081747	E048.1	1949	1040	1220	1949A	B
1948	0945	1033	1948A	B		100504	E021.3	1950	1225	1407	1950A	B
1949	1132	1220	1949A	B		115220	W005.6	1951	1412	1550	1951A	B
1950	1319	1407	1950A	B		133937	W032.4	1952	1555	1733	1952A	B
1951	1506	1549	1951A	B		152653	W059.2	1953	1738	1919	1953A	B
1952	1654	1733	1952A	B	1N	171410	W086.0	1954	1924	2103	1954A	B
1953	1841	1918	1953A	B		190126	W112.8	1955	2108	2252	1955A	B
1953	1924	1930	1954A	B								
1954	2028	2102	1954A	B		204843	W139.6					
1954	2108	2117	1955A	B								
1955	2216	2251	1955A	B		223559	W166.5					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1943						020218	W038.0		0329	0519	1945R	B
1944	0329	0423	1945R	B		034934	W064.9		0525	0707	1946R	B
1945	0511	0518	1945R	B		053651	W091.7		0712	0848	1947A	B
1945	0525	0610	1946R	B	1W				0852	1035	1948A	B
1946	0659	0706	1946R	B	1W	072408	W118.5		1040	1221	1949A	B
1946	0711	0757	1947A	B					1225	1407	1950A	B
1947	0853	0945	1948A	B		091124	W145.3		1412	1550	1951A	B
1948	1040	1132	1949A	B		105841	W172.1		1554	1733	1952A	B
1949	1226	1319	1950A	B		124557	E161.1		1738	1919	1953A	B
1950	1412	1506	1951A	B		143314	E134.2		1924	2103	1954A	B
1951	1555	1654	1952A	B	1S	162030	E107.4		2108	0249	1955A	B
1952	1742	1841	1953A	B		180747	E080.6					
1953	1930	2028	1954A	B		195503	E053.8					
1954	2117	2216	1955A	B		214220	E027.0					
1955						232936	E000.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
6 MAY 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1956						002316	E166.7	1957	0055	0249	1958R	A
1957	0150	0239	1958R	A		021032	E139.9	1958	0250	0435	1958R	B
1958	0337	0426	1958R	B		035749	E113.1	1959	0440	0621	1959R	B
1959	0525	0613	1959R	B		054505	E086.3	1960	0627	0805	1960A	B
1960	0712	0801	1960A	B		073222	E059.5	1961	0809	0951	1961A	B
1961	0859	0948	1961A	B		091939	E032.6	1962	0956	1136	1962A	B
1962	1047	1135	1962A	B		110655	E005.8	1963	1140	1322	1963A	B
1963	1234	1321	1963A	B		125412	W021.0	1964	1327	1508	1964A	B
1964	1421	1506	1964A	B		144128	W047.8	1965	1512	1652	1965A	B
1965	1608	1650	1965A	B		162845	W074.7	1966	1656	1833	1966A	B
1966	1756	1832	1966A	B	1N	181601	W101.5	1967	1838	2020	1967A	B
1966	1838	1844	1967A	B				1968	2024	2209	1968A	B
1967	1943	2018	1967A	B		200318	W128.3	1969	2210	0008	1974A	A
1967	2023	2032	1968A	B	2S							
1968	2130	2206	1968A	B	2S	215034	W155.1					
1968	2210	2219	1974A	A								
1969	2317	0006	1974A	B		233751	E178.1					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1956	0054	0150	1958R	A		011653	W026.7		0055	0249	1958R	A
1957	0239	0248	1958R	A		030409	W053.5		0249	0435	1958R	B
1957	0250	0337	1958R	B					0440	0621	1959R	B
1958	0426	0434	1958R	B		045126	W080.3		0627	0805	1960A	B
1958	0440	0525	1959R	B					0810	0951	1961A	B
1959	0613	0620	1959R	B		063843	W107.1		0956	1135	1962A	B
1959	0627	0712	1960A	B					1140	1322	1963A	B
1960	0810	0859	1961A	B		082559	W134.0		1327	1507	1964A	B
1961	0956	1047	1962A	B		101316	W160.8		1513	1651	1965A	B
1962	1140	1234	1963A	B		120032	E172.4		1656	1833	1966A	B
1963	1327	1421	1964A	B		134749	E145.6		1838	2019	1967A	B
1964	1513	1608	1965A	B		153505	E118.8		2024	2209	1968A	B
1965	1657	1756	1966A	B	1S	172222	E092.0		2210	0008	1974A	A
1966	1844	1943	1967A	B		190938	E065.1					
1967	2032	2130	1968A	B	2N	205655	E038.3					
1968	2219	2317	1974A	A		224411	E011.5					
1969						003128	W015.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
7 MAY 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID	ASC. AND DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR					ASC. NODE						
1970						012507	E151.3	1971	0155	0355	1971R	A
1971	0252	0341	1971R	B		031224	E124.4	1972	0400	0543	1972R	B
1972	0439	0528	1972R	B		045941	E097.6	1973	0549	0724	1973R	B
1973	0627	0715	1973R	B	2S	064657	E070.8	1974	0729	0904	1974A	B
1974	0814	0903	1974A	B		083414	E044.0	1975	0909	1051	1975A	B
1975	1001	1050	1975A	B		102130	E017.2	1976	1056	1238	1976A	B
1976	1148	1237	1976A	B		120847	W009.7	1977	1243	1422	1977A	B
1977	1336	1422	1977A	B		135603	W036.5	1978	1428	1607	1978A	B
1978	1523	1606	1978A	B		154320	W063.3	1979	1611	1750	1979A	B
1979	1710	1749	1979A	B		173036	W090.1	1980	1754	1934	1980A	B
1979	1754	1759	1980A	B				1981	2003	2120	1981A	B
1980	1858	1933	1980A	B		191753	W116.9	1982	2125	2309	1982A	B
1980	1939	1946	1981A	B								
1981	2045	2119	1981A	B		210509	W143.8					
1981	2125	2134	1982A	B								
1982	2232	2309	1982A	B		225226	W170.6					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
1970	0156	0252	1971R	B		021844	W042.2	0155	0355	1971R	B	
1971	0341	0354	1971R	B		040601	W069.0	0400	0543	1972R	B	
1971	0400	0439	1972R	B				0549	0725	1973R	B	
1972	0528	0542	1972R	B		055318	W095.8	0729	0904	1974A	B	
1972	0548	0627	1973R	B	2N			0908	1051	1975A	B	
1973	0715	0722	1973R	B	2N	074034	W122.6	1055	1237	1976A	B	
1973	0729	0814	1974A	B				1242	1423	1977A	B	
1974	0916	1001	1975A	B		092751	W149.4	1427	1607	1978A	B	
1975	1055	1148	1976A	B		111507	W176.2	1611	1750	1979A	B	
1976	1242	1336	1977A	B		130224	E156.9	1754	1934	1980A	B	
1977	1428	1523	1978A	B		144940	E130.1	2003	2120	1981A	B	
1978	1612	1710	1979A	B		163657	E103.3	2125	2310	1982A	B	
1979	1759	1858	1980A	B		182413	E076.5					
1980	1946	2045	1981A	B		201130	E049.7					
1981	2134	2232	1982A	B		215846	E022.8					
1982						234603	W004.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
8 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
1983						003943	E162.6	1984	0110	0304	1986R	A
1984	0207	0255	1986R	A		022659	E135.8	1985	0304	0450	1985R	B
1985	0354	0443	1985R	B		041416	E109.0	1986	0456	0637	1986R	B
1986	0541	0630	1986R	B		060132	E082.2	1987	0643	0820	1987A	B
1987	0729	0817	1987A	B		074849	E055.3	1988	0825	1006	1988A	B
1988	0916	1005	1988A	B		093605	E028.5	1989	1011	1152	1989A	B
1989	1103	1150	1989A	B		112322	E001.7	1990	1157	1239	1990A	B
1990	1250	1336	1990A	B	2S	131038	W025.1	1991	1343	1523	1991A	B
1991	1438	1522	1991A	B		145755	W051.9	1992	1528	1655	1992A	B
1992	1625	1706	1992A	B		164511	W078.8	1993	1712	1850	1993A	B
1993	1812	1850	1993A	B		183228	W105.6	1994	1856	2035	1994A	B
1994	2000	2034	1994A	B		201945	W132.4	1995	2040	2225	1995A	B
1994	2040	2048	1995A	B				1996	2226	0025	1999R	A
1995	2147	2224	1995A	B		220701	W159.2					
1995	2225	2236	1999R	A								
1996	2334	0023	1999R	A		235418	E174.0					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
1983	0110	0207	1986R	A		013319	W030.8	0111	0304	1986R	A	
1984	0255	0303	1986R	A		032036	W057.6	0305	0450	1985R	B	
1984	0304	0354	1985R	B				0456	0638	1986R	B	
1985	0443	0450	1985R	B		050752	W084.4	0642	0820	1987A	B	
1985	0456	0541	1986R	B				0825	1006	1988A	B	
1986	0630	0637	1986R	B		065509	W111.3	1011	1151	1989A	B	
1986	0642	0729	1987A	B				1157	1338	1990A	B	
1987	0842	0916	1988A	B		084226	W138.1	1343	1523	1991A	B	
1988	1010	1103	1989A	B		102942	W164.9	1528	1707	1992A	B	
1989	1156	1250	1990A	B	2N	121659	E168.3	1711	1851	1993A	B	
1990	1343	1438	1991A	B		140415	E141.5	1857	2035	1994A	B	
1991	1528	1625	1992A	B		155132	E114.7	2040	2225	1995A	B	
1992	1714	1812	1993A	B		173848	E087.8	2226	0024	1999R	B	
1993	1901	2000	1994A	B		192605	E061.0					
1994	2048	2147	1995A	B		211321	E034.2					
1995	2236	2334	1999R	A		230038	E007.4					
1996						004754	W019.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
9 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
1997						014134	E147.1	1998	0223	0407	1998R	B
1998	0309	0357	1998R	B		032851	E120.3	1999	0412	0533	1999R	B
1999	0456	0533	1999R	B		051607	E093.5	2000	0557	0736	2000A	B
2000	0643	0732	2000A	B		070324	E066.7	2001	0740	0922	2001A	B
2001	0830	0919	2001A	B		085040	E039.9	2002	0927	1108	2002A	B
2002	1018	1107	2002A	B		103757	E013.1	2003	1113	1252	2003A	B
2003	1205	1252	2003A	B		122513	W013.8	2004	1257	1438	2004A	B
2004	1352	1438	2004A	B		141230	W040.6	2005	1445	1622	2005A	B
2005	1540	1622	2005A	B		155946	W067.4	2006	1628	1804	2006A	B
2006	1727	1804	2006A	B		174703	W094.2	2007	1809	1950	2007A	B
2006	1809	1816	2007A	B				2008	1955	2136	2008A	B
2007	1914	1949	2007A	B		193420	W121.1					
2007	1955	2003	2008A	B	1W							
2008	2101	2136	2008A	B	1W	212136	W147.9					
2009						230853	W174.7					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
1997	0222	0309	1998R	B		023511	W046.3		0222	0407	1998R	B
1998	0357	0407	1998R	B		042227	W073.1		0412	0533	1999R	A
1998	0412	0456	1999R	B					0557	0735	2000A	B
1999	0557	0643	2000A	B		060944	W099.9		0740	0922	2001A	B
2000	0740	0830	2001A	B		075701	W126.7		0927	1107	2002A	B
2001	0946	1018	2002A	B		094417	W153.5		1113	1252	2003A	B
2002	1113	1205	2003A	B		113134	E179.7		1258	1439	2004A	B
2003	1257	1352	2004A	B		131850	E152.8		1445	1623	2005A	B
2004	1445	1540	2005A	B		150607	E126.0		1628	1804	2006A	B
2005	1628	1727	2006A	B		165323	E099.2		1809	1947	2007A	B
2006	1816	1914	2007A	B		184040	E072.4		1955	2136	2008A	B
2007	2003	2101	2008A	B	1E	202756	E045.6					
2008						221513	E018.7					
2009						000229	W008.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
10 MAY 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE					INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
2010						005609	E158.5	2012	0323	0506	2012A	B
2011						024326	E131.7	2013	0512	0654	2013A	B
2012	0411	0459	2012R	B		043042	E104.9	2014	0702	0836	2014A	B
2013	0558	0647	2013R	B	1S	061759	E078.0	2015	0841	1013	2015A	B
2014	0745	0834	2014A	A		080515	E051.2	2016	1026	1209	2016A	B
2015	0932	1021	2015A	B		095232	E024.4	2017	1215	1354	2017A	B
2016	1120	1208	2016A	B		113948	W002.4	2018	1358	1537	2018A	B
2017	1307	1353	2017A	B		132705	W029.2	2019	1543	1721	2019A	B
2018	1454	1537	2018A	B		151422	W056.1	2020	1727	1905	2020A	B
2019	1642	1722	2019A	B		170138	W082.9	2021	1910	2051	2021A	B
2020	1829	1904	2020A	B		184855	W109.7	2022	2056	2241	2022A	B
2020	1910	1918	2021A	B								
2021	2016	2051	2021A	B		203611	W136.5					
2021	2056	2105	2022A	B								
2022	2203	2241	2022A	B		222328	W163.3					
2022	2243	2252	2026R	A								
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
2010						014946	W034.9	0323	0507	2012R	B	
2011	0323	0411	2012R	B		033702	W061.7	0512	0654	2013R	B	
2012	0459	0506	2012R	B		052419	W088.5	0659	0836	2014A	B	
2012	0512	0558	2013R	B	1N			0841	1013	2015A	B	
2013	0647	0653	2013R	B	1N	071136	W115.4	1026	1210	2016A	B	
2013	0659	0745	2014A	A				1214	1354	2017A	B	
2014	0841	0932	2015A	B		085852	W142.2	1358	1537	2018A	B	
2015	1027	1120	2016A	B		104609	W169.0	1543	1721	2019A	B	
2016	1215	1307	2017A	B		123325	E164.2	1727	1905	2020A	B	
2017	1358	1454	2018A	B		142042	E137.4	1910	2051	2021A	B	
2018	1543	1642	2019A	B		160758	E110.5	2056	2242	2022A	B	
2019	1730	1829	2020A	B		175515	E083.7	2243	0041	2026R	A	
2020	1918	2016	2021A	B		194231	E056.9					
2021	2105	2203	2022A	B		212948	E030.1					
2022	2252	2351	2026R	A		231704	E003.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
11 MAY 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
2023	2351	0039	2026R	A		001044	E169.9	2023	2242	0041	2025R	A
2024						015801	E143.0	2025	0237	0422	2025R	B
2025	0325	0414	2026R	B		034517	E116.2	2027	0614	0750	2027A	B
2026						053234	E089.4	2028	0757	0938	2028A	B
2027	0700	0749	2027A	B		071950	E062.6	2029	0943	1123	2029A	B
2028	0847	0934	2028A	B		090707	E035.8	2030	1129	1308	2030A	B
2029	1034	1123	2029A	B		105424	E008.9	2031	1314	1452	2031A	B
2030	1222	1308	2030A	B		124140	W017.9	2032	1458	1637	2032A	B
2031	1409	1452	2031A	B		142857	W044.7	2033	1643	1823	2033A	B
2032	1556	1637	2032A	B		161613	W071.5	2034	1828	2005	2034A	B
2033	1743	1823	2033A	B		180330	W098.3	2035	2011	2152	2035A	B
2034	1931	2006	2034A	B		195046	W125.2					
2034	2011	2020	2035A	B								
2035	2118	2152	2035A	B		213803	W152.0					
2036						232519	W178.8					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
2023						010421	W023.6	0237	0422	2026R	B	
2024	0238	0325	2026R	B		025137	W050.4	0614	0750	2027A	B	
2025	0414	0428	2026R	B		043854	W077.2	0756	0938	2028A	B	
2026	0614	0700	2027A	B		062611	W104.0	0943	1124	2029A	B	
2027	0756	0847	2028A	B		081327	W130.8	1129	1309	2030A	B	
2028	0943	1034	2029A	B		100044	W157.7	1314	1453	2031A	B	
2029	1129	1222	2030A	B		114800	E175.5	1459	1637	2032A	B	
2030	1314	1409	2031A	B		133517	E148.7	1643	1823	2033A	B	
2031	1459	1556	2032A	B		152233	E121.9	1829	2006	2034A	B	
2032	1645	1743	2033A	B		170950	E095.1	2011	2153	2035A	B	
2033	1832	1931	2034A	B		185706	E068.3	2358	0143	2039R	A	
2034	2020	2118	2035A	B		204423	E041.4					
2035						223139	E014.6					
2036	2358	0053	2039R	A		001856	W012.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
12 MAY 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
2037	0053	0141	2039R	A		011236	E154.4	2037	2358	0143	2039R	A
2038	0240	0329	2038R	B		025952	E127.6	2038	0148	0341	2038R	B
2039	0427	0516	2039R	B		044709	E100.8	2039	0348	0522	2039R	B
2040	0614	0703	2040R	B		063426	E073.9	2040	0527	0714	2040R	B
2041	0802	0851	2041A	B		082142	E047.1	2041	0718	0853	2041R	B
2042	0949	1038	2042A	B		100859	E020.3	2042	0858	1039	2042A	B
2043	1136	1221	2043A	B		115615	W006.5	2043	1044	1122	2043A	B
2044	1324	1407	2044A	B		134332	W033.4	2044	1228	1410	2044A	B
2045	1511	1554	2045A	B		153048	W060.2	2045	1414	1554	2045A	B
2046	1658	1737	2046A	B		171805	W087.0	2046	1600	1735	2046A	B
2047	1845	1922	2047A	B		190521	W113.8	2047	1742	1922	2047A	B
2047	1928	1934	2048A	B				2048	1928	2106	2048A	B
2048	2033	2106	2048A	B		205238	W140.6	2049	2112	2258	2049A	B
2048	2112	2122	2049A	B								
2049	2220	2256	2049A	B		223954	W167.4					
2049	2259	2309	2052R	A								
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
2037	0144	0240	2038R	B		020612	W039.0		0143	0341	2038R	B
2038	0329	0340	2038R	B		035329	W065.8		0348	0522	2039R	B
2038	0348	0427	2039R	B					0527	0713	2040A	B
2039	0516	0522	2039R	B		054045	W092.7		0718	0853	2041A	B
2039	0527	0614	2040R	B					0858	1039	2042A	B
2040	0703	0713	2040R	B		072802	W119.5		1044	1223	2043A	B
2040	0719	0802	2041A	B					1228	1409	2044A	B
2041	0858	0949	2042A	B		091519	W146.3		1414	1555	2045A	B
2042	1044	1136	2043A	B		110235	W173.1		1600	1736	2046A	B
2043	1228	1324	2044A	B		124952	E160.1		1742	1922	2047A	B
2044	1414	1511	2045A	B		143708	E133.3		1928	2107	2048A	B
2045	1600	1658	2046A	B		162425	E106.4		2112	2258	2049A	B
2046	1747	1845	2047A	B		181141	E079.6		2259	0057	2052R	A
2047	1934	2033	2048A	B		195858	E052.8					
2048	2122	2220	2049A	B		214614	E026.0					
2049	2309	0007	2052R	A		233331	W000.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
13 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
2050	0007	0056	2052R	A		002711	E165.7	2050	2259	0057	2052R	A
2051						021427	E138.9	2052	0248	0439	2052R	B
2052	0342	0431	2052R	B		040144	E112.1	2053	0444	0625	2053R	B
2053	0529	0618	2053R	B		054901	E085.3	2054	0629	0808	2054A	B
2054	0716	0805	2054A	B		073617	E058.5	2055	0813	0953	2055A	B
2055						092334	E031.6	2056	0958	1140	2056A	B
2056	1051	1139	2056A	B		111050	E004.8	2057	1145	1225	2057A	B
2057	1238	1325	2057A	B	1W	125807	W022.0	2058	1331	1508	2058A	B
2058	1426	1509	2058A	B		144523	W048.8	2059	1514	1654	2059A	B
2059	1613	1654	2059A	B		163240	W075.6	2060	1659	1838	2060A	B
2060	1800	1839	2060A	B		181956	W102.5	2061	1844	2024	2061A	B
2061	1947	2023	2061A	B		200713	W129.3	2062	2029	2158	2062A	B
2061	2029	2036	2062A	B								
2062	2135	2209	2062A	B		215429	W156.1					
2063						234146	E177.1					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
2050						012047	W027.7		0253	0437	2052R	B
2051	0252	0342	2052R	B		030804	W054.5		0444	0625	2053R	B
2052	0431	0438	2052R	B		045520	W081.3		0631	0809	2054A	B
2052	0444	0529	2053R	B					0813	0953	2055A	B
2053	0618	0625	2053R	B		064237	W108.1		0958	1140	2056A	B
2053	0632	0716	2054A	B					1145	1326	2057A	B
2054						082954	W134.9		1331	1508	2058A	B
2055	0958	1051	2056A	B		101710	W161.8		1514	1654	2059A	B
2056	1145	1238	2057A	B	1E	120427	E171.4		1659	1839	2060A	B
2057	1331	1426	2058A	B		135143	E144.6		1844	2024	2061A	B
2058	1514	1613	2059A	B		153900	E117.8		2029	2210	2062A	B
2059	1702	1800	2060A	B		172616	E091.0					
2060	1849	1947	2061A	B		191333	E064.2					
2061	2036	2135	2062A	B		210049	E037.3					
2062						224806	E010.5					
2063	0013	0109	2066R	A	1N	003522	W016.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
14 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
2064	0109	0158	2066R	A	1S	012903	E150.3	2064	0014	0209	2066R	A
2065	0257	0345	2065R	B		031619	E123.5	2065	0200	0356	2065R	B
2066	0444	0517	2066R	B	1W	050336	E096.6	2066	0403	0519	2066R	B
2067	0631	0720	2067A	B		065052	E069.8	2067	0544	0723	2067A	B
2068	0818	0907	2068A	B	1N	083809	E043.0	2068	0728	0908	2068A	B
2069	1006	1054	2069A	B	1N	102525	E016.2	2069	0914	1054	2069A	B
2070	1153	1240	2070A	B	1N	121242	W010.6	2070	1100	1239	2070A	B
2071	1340	1426	2071A	B		135958	W037.5	2071	1245	1423	2071A	B
2072	1528	1608	2072A	B	1N	154715	W064.3	2072	1432	1609	2072A	B
2073	1715	1754	2073A	B	1N	173431	W091.1	2073	1613	1754	2073A	B
2074	1902	1939	2074A	B		192148	W117.9	2074	1759	1940	2074A	B
2074	1945	1951	2075A	B	1N1W			2075	1945	2122	2075A	B
2075	2049	2122	2075A	B	1N1W	210904	W144.7	2076	2128	2315	2076A	B
2075	2128	2138	2076A	B								
2076	2237	2315	2076A	B		225621	W171.6					
2076	2316	2325	2079R	A	1N							
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
2064	0158	0206	2066R	A	1N	022239	W043.1		0014	0209	2066R	A
2064	0200	0257	2065R	B					0200	0357	2065R	B
2065	0345	0356	2065R	B		040955	W070.0		0402	0519	2066R	B
2065	0403	0444	2066R	B	1E				0543	0723	2067A	B
2066	0544	0631	2067A	B		055712	W096.8		0728	0909	2068A	B
2067	0728	0818	2068A	B	1S	074428	W123.6		0914	1055	2069A	B
2068	0914	1006	2069A	B	1S	093145	W150.4		1059	1239	2070A	B
2069	1100	1153	2070A	B	1S	111902	W177.2		1245	1425	2071A	B
2070	1245	1340	2071A	B		130618	E156.0		1431	1609	2072A	B
2071	1432	1528	2072A	B	1S	145335	E129.1		1613	1754	2073A	B
2072	1616	1715	2073A	B	1S	164051	E102.3		1759	1940	2074A	B
2073	1804	1902	2074A	B		182808	E075.5		1945	2123	2075A	B
2074	1951	2049	2075A	B	1S1E	201524	E048.7		2128	2315	2076A	B
2075	2138	2237	2076A	B		220241	E021.9		2315	0114	2079R	A
2076	2325	0024	2079R	A	1S	234957	W005.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
15 MAY 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID	ASC. AND DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR					ASC. NODE						
2077	0024	0113	2079R	A	1N	004338	E161.6	2077	2316	0115	2079R	A
2078						023054	E134.8	2079	0307	0444	2079R	B
2079	0358	0447	2079R	B	1N	041811	E108.0	2080	0449	0642	2080R	B
2080	0546	0635	2080R	B	1N	060527	E081.2	2081	0647	0822	2081A	B
2081	0733	0822	2081A	B	1N1W	075244	E054.4	2082	0828	1008	2082A	B
2082	0920	1008	2082A	B	1N	094000	E027.5	2083	1014	1155	2083A	B
2083	1108	1155	2083A	B		112717	E000.7	2084	1200	1344	2084A	B
2084	1255	1343	2084A	B		131433	W026.1	2085	1349	1526	2085A	B
2085	1442	1525	2085A	B		150150	W052.9	2086	1531	1710	2086A	B
2086	1629	1710	2086A	B		164906	W079.7	2087	1715	1853	2087A	B
2087	1817	1853	2087A	B	1N	183623	W106.6	2088	1859	2040	2088A	B
2087	1859	1906	2088A	B				2089	2044	2228	2089A	B
2088	2004	2039	2088A	B		202340	W133.4					
2088	2045	2053	2089A	B	1N							
2089	2151	2227	2089A	B	1N	221056	W160.2					
2090						235813	E173.0					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
2077						013714	W031.8	0307	0454	2079R	B	
2078	0308	0358	2079R	B	1S	032430	W058.6	0459	0642	2080R	B	
2079	0447	0454	2079R	B	1S	051147	W085.4	0647	0823	2081A	B	
2079	0459	0546	2080R	B	1S			0827	1009	2082A	B	
2080	0635	0641	2080R	B	1S	065903	W112.2	1013	1155	2083A	B	
2080	0647	0733	2081A	B	1S1E			1200	1343	2084A	B	
2081	0828	0920	2082A	B	1S	084620	W139.0	1348	1526	2085A	B	
2082	1014	1108	2083A	B		103336	W165.9	1530	1710	2086A	B	
2083	1200	1255	2084A	B		122053	E167.3	1715	1853	2087A	B	
2084	1348	1442	2085A	B		140810	E140.5	1859	2039	2088A	B	
2085	1531	1629	2086A	B		155526	E113.7	2044	2227	2089A	B	
2086	1718	1817	2087A	B	1S	174243	E086.9					
2087	1906	2004	2088A	B		192959	E060.0					
2088	2053	2151	2089A	B	1S	211716	E033.2					
2089						230432	E006.4					
2090	0030	0126	12093R	A	2S	005149	W020.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
16 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
2091	0126	0215	2093R	A	2N	014529	E146.2	2091	0030	0226	2093R	A
2092	0313	0402	2092R	B	1N	033246	E119.4	2092	0227	0412	2092R	B
2093	0500	0536	2093R	B	1N	052002	E092.5	2093	0418	0536	2093R	B
2094	0648	0736	2094A	B		070719	E065.7	2094	0600	0739	2094A	B
2095	0835	0924	2095A	B		085435	E038.9	2095	0743	0925	2095A	B
2096	1022	1111	2096A	B	1N	104152	E012.1	2096	0930	1111	2096A	B
2097	1210	1257	2097A	B	1W	122908	W014.7	2097	1117	1258	2097A	B
2098	1357	1442	2098A	B		141625	W041.6	2098	1302	1436	2098A	B
2099	1544	1626	2099A	B	1N	160342	W068.4	2099	1447	1628	2099A	B
2100	1731	1810	2100A	B		175058	W095.2	2100	1632	1809	2100A	B
2101	1919	1954	2101A	B		193815	W122.0	2101	1815	1954	2101A	B
2101	1959	2007	2102A	B								
2102	2106	2143	2102A	B		212531	W148.8	2102	1959	2144	2102A	B
2102	2145	2155	2106R	A				2103	2144	2346	2106R	A
2103	2253	2342	2106R	A		231248	W175.7					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
2091	0215	0225	2093R	A	2S	023905	W047.2		0030	0226	2093R	A
2091	0227	0313	2092R	B	1S				0226	0412	2092R	B
2092	0402	0412	2092R	B	1S	042622	W074.1		0417	0536	2093R	B
2092	0417	0500	2093R	B	1S				0600	0739	2094A	B
2093	0601	0648	2094A	B		061338	W100.9		0743	0925	2095A	B
2094	0744	0835	2095A	B		080055	W127.7		0930	1111	2096A	B
2095	0930	1022	2096A	B	1S	094811	W154.5		1117	1258	2097A	B
2096	1117	1210	2097A	B	1E	113528	E178.7		1303	1436	2098A	B
2097	1303	1357	2098A	B		132244	E151.9		1447	1627	2099A	B
2098	1448	1544	2099A	B	1S	151001	E125.0		1632	1810	2100A	B
2099	1633	1731	2100A	B		165718	E098.2		1815	1954	2101A	B
2100	1820	1919	2101A	B		184434	E071.4		1959	2144	2102A	B
2101	2007	2106	2102A	B		203151	E044.6		2145	2347	2106R	A
2102	2155	2253	2106R	A		221907	E017.8					
2103						000624	W009.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
17 MAY 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE TIME	LONG			INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	HRMNSS	DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
2104						010004	E157.5	2106	0323	0510	2106R	B
2105						024721	E130.7	2107	0515	0658	2107R	B
2106	0415	0504	2106R	B	1N	043437	E103.9	2108	0703	0840	2108A	B
2107	0602	0651	2107R	B	1N	062154	E077.1	2109	0845	1026	2109A	B
2108	0750	0838	2108A	B	1N	080910	E050.3	2110	1031	1212	2110A	B
2109	0937	1025	2109A	B		095627	E023.4	2111	1217	1357	2111A	B
2110	1124	1211	2110A	B		114343	W003.4	2112	1402	1541	2112A	B
2111	1311	1357	2111A	B		133100	W030.2	2113	1546	1727	2113A	B
2112	1459	1541	2112A	B	1N	151817	W057.0	2114	1733	1911	2114A	B
2113	1646	1727	2113A	B		170533	W083.9	2115	1916	2056	2115A	B
2114	1833	1911	2114A	B	1N	185250	W110.7	2116	2101	2242	2116A	B
2115	2021	2056	2115A	B	3N	204006	W137.5					
2115	2102	2109	2116A	B								
2116	2208	2240	2116A	B		222723	W164.3					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
2104						015340	W035.9		0322	0510	2106R	B
2105	0323	0415	2106R	B	1S	034057	W067.7		0515	0658	2107R	B
2106	0504	0510	2106R	B	1S	052813	W089.5		0703	0840	2108A	B
2106	0516	0602	2107R	B	1S				0845	1026	2109A	B
2107	0651	0658	2107R	B	1S	071530	W116.3		1030	1212	2110A	B
2107	0704	0750	2108A	B	1S				1217	1357	2111A	B
2108	0845	0937	2109A	B		090246	W143.2		1402	1541	2112A	B
2109	1031	1124	2110A	B		105003	W170.0		1546	1727	2113A	B
2110	1217	1311	2111A	B		123719	E163.2		1733	1911	2114A	B
2111	1403	1459	2112A	B	1S	142436	E136.4		1917	2056	2115A	B
2112	1548	1646	2113A	B		161152	E109.6		2101	2242	2116A	B
2113	1735	1833	2114A	B	1S	175909	E082.8					
2114	1922	2021	2115A	B	3S	194626	E055.9					
2115	2109	2208	2116A	B		213342	E029.1					
2116						232059	E002.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
18 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
2117						001439	E168.9	2118	0047	0241	2119R	A
2118	0142	0231	2119R	A		020156	E142.1	2119	0241	0427	2119R	B
2119	0330	0418	2119R	B	1N	034912	E115.2	2120	0434	0612	2120R	B
2120	0517	0606	2120R	B		053629	E088.4	2121	0617	0755	2121A	B
2121	0704	0753	2121A	B		072345	E061.6	2122	0800	0940	2122A	B
2122	0852	0940	2122A	B		091102	E034.8	2123	0946	1126	2123A	B
2123	1039	1128	2123A	B		105819	E008.0	2124	1134	1314	2124A	B
2124	1226	1313	2124A	B		124535	W018.9	2125	1319	1458	2125A	B
2125	1413	1458	2125A	B		143252	W045.7	2126	1503	1642	2126A	B
2126	1601	1641	2126A	B		162008	W072.5	2127	1646	1827	2127A	B
2127	1748	1825	2127A	B		180725	W099.3	2128	1831	2011	2128A	B
2127	1831	1837	2128A	B				2129	2017	2157	2129A	B
2128	1935	2011	2128A	B		195441	W126.1	2130	2202	0001	2133R	A
2128	2018	2024	2129A	B	1N							
2129	2122	2156	2129A	B	1N	214158	W153.0					
2129	2201	2211	2133R	A								
2130	2310	2359	2133R	A		232914	W179.8					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
2117	0047	0142	2119R	A		011815	W024.5	0047	0241	2119R	A	
2118	0231	0240	2119R	A		025532	W051.3	0241	0427	2119R	B	
2118	0242	0330	2119R	B	1S			0434	0613	2120R	B	
2119	0418	0427	2119R	B	1S	044248	W078.2	0617	0755	2121A	B	
2119	0434	0517	2120R	B				0801	0941	2122A	B	
2120	0606	0612	2120R	B		063005	W105.0	0946	1127	2123A	B	
2120	0618	0704	2121A	B				1134	1314	2124A	B	
2121	0802	0852	2122A	B		081721	W131.8	1318	1458	2125A	B	
2122	0946	1039	2123A	B		100438	W158.6	1503	1641	2126A	B	
2123	1134	1226	2124A	B		115154	E174.6	1646	1826	2127A	B	
2124	1319	1413	2125A	B		133911	E147.8	1831	2011	2128A	B	
2125	1504	1601	2126A	B		152627	E120.9	2017	2157	2129A	B	
2126	1649	1748	2127A	B		171344	E094.1	2202	0000	2133R	A	
2127	1837	1935	2128A	B		190100	E067.3					
2128	2024	2122	2129A	B	1S	204817	E040.5					
2129	2211	2310	2133R	A		223534	E013.7					
2130						002250	W013.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
19 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
2131						011631	E153.4	2132	0147	0345	2132R	B
2132	0244	0333	2132R	B	1N	030347	E126.6	2133	0351	0527	2133R	B
2133	0432	0520	2133R	B		045104	E099.8	2134	0537	0717	2134R	B
2134	0619	0708	2134R	B	1N	063820	E073.0	2135	0723	0858	2135A	B
2135	0806	0855	2135A	B		082537	E046.1	2136	0903	1042	2136A	B
2136	0953	1042	2136A	B	1N	101254	E019.3	2137	1049	1230	2137A	B
2137	1141	1229	2137A	B		120010	W007.5	2138	1235	1415	2138A	B
2138	1328	1414	2138A	B		134727	W034.3	2139	1419	1559	2139A	B
2139	1515	1557	2139A	B	1W	153443	W061.1	2140	1602	1743	2140A	B
2140	1703	1741	2140A	B	1W	172200	W088.0	2141	1747	1929	2141A	B
2141	1850	1927	2141A	B	1N	190916	W114.8	2142	1933	2112	2142A	B
2141	1934	1939	2142A	B	1S			2143	2117	2300	2143A	B
2142	2037	2112	2142A	B	1S	205633	W141.6					
2142	2117	2126	2143A	B								
2143	2224	2259	2143A	B		224349	W168.4					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
2131	0148	0244	2132R	B	1S	021007	W040.0	0147	0345	2132R	B	
2132	0333	0345	2132R	B	1S	035723	W066.8	0351	0526	2133R	B	
2132	0351	0432	2133R	B				0531	0717	2134R	B	
2133	0520	0526	2133R	B		054440	W093.6	0722	0858	2135A	B	
2133	0532	0619	2134R	B	1S			0902	1041	2136A	B	
2134	0708	0717	2134R	B	1S	073156	W120.4	1049	1230	2137A	B	
2134	0723	0806	2135A	B				1235	1414	2138A	B	
2135	0903	0953	2136A	B	1S	091913	W147.3	1419	1558	2139A	B	
2136	1049	1141	2137A	B		110629	W174.1	1602	1742	2140A	B	
2137	1235	1328	2138A	B		125346	E159.1	1747	1928	2141A	B	
2138	1419	1515	2139A	B	1E	144102	E132.3	1933	2112	2142A	B	
2139	1604	1703	2140A	B	1E	162819	E105.5	2117	2300	2143A	B	
2140	1751	1850	2141A	B	1S	181535	E078.6					
2141	1939	2037	2142A	B	1N	200252	E051.8					
2142	2126	2224	2143A	B		215008	E025.0					
2143						233725	W001.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
20 MAY 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
2144						003106	E164.8	2145	0103	0256	2145R	A
2145	0159	0248	2146R	A		021822	E138.0	2146	0257	0448	2146R	B
2146	0346	0435	2146R	B		040539	E111.1	2147	0451	0629	2147R	B
2147	0534	0622	2147R	B		055256	E084.3	2148	0634	0812	2148A	B
2148	0721	0810	2148A	B		074012	E057.5	2149	0816	0957	2149A	B
2149	0908	0957	2149A	B	1N	092729	E030.7	2150	1002	1144	2150A	B
2150	1055	1144	2150A	B		111445	E003.9	2151	1149	1329	2151A	B
2151	1243	1328	2151A	B		130202	W023.0	2152	1334	1514	2152A	B
2152	1430	1513	2152A	B		144918	W049.8	2153	1519	1659	2153A	B
2153	1617	1658	2153A	B		163635	W076.6	2154	1703	1841	2154A	B
2154	1804	1841	2154A	B	1N	182351	W103.4	2155	1846	2026	2155A	B
2154	1846	1853	2155A	B				2156	2031	2214	2156A	B
2155	1952	2025	2155A	B		201108	W130.2	2157	2218	0016	2160R	A
2155	2031	2041	2156A	B								
2156	2139	2213	2156A	B		215824	W157.1					
2156	2218	2228	2160R	A	1N							
2157	2326	0015	2160R	A	1N	234541	E176.1					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
2144	0103	0159	2146R	A		012442	W028.6	0103	0256	2146R	A	
2145	0248	0256	2146R	A		031158	W055.5	0257	0446	2146R	B	
2145	0257	0346	2146R	B				0451	0629	2147R	B	
2146	0435	0446	2146R	B		045915	W082.3	0625	0811	2148A	B	
2146	0451	0534	2147R	B				0816	0957	2149A	B	
2147	0622	0629	2147R	B		064631	W109.1	1002	1144	2150A	B	
2147	0634	0721	2148A	B				1149	1329	2151A	B	
2148	0817	0908	2149A	B	1S	083348	W135.9	1334	1513	2152A	B	
2149	1002	1055	2150A	B		102104	W162.7	1519	1658	2153A	B	
2150	1149	1243	2151A	B		120821	E170.5	1703	1841	2154A	B	
2151	1334	1430	2152A	B		135537	E143.6	1846	2026	2155A	B	
2152	1519	1617	2153A	B		154254	E116.8	2030	2214	2156A	B	
2153	1706	1804	2154A	B	1S	173010	E090.0	2218	0016	2160R	A	
2154	1853	1952	2155A	B		191727	E063.2					
2155	2041	2139	2156A	B		210443	E036.4					
2156	2228	2326	2160R	A	1S	225200	E009.6					
2157						003916	W017.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
21 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
2158						013258	E149.3	2159	0204	0400	2159R	B
2159	0301	0350	2159R	B	1N	032014	E122.5	2160	0406	0539	2160R	B
2160	0448	0537	2160R	B		050731	E095.7	2161	0548	0728	2161A	B
2161	0635	0724	2161A	B		065447	E068.9	2162	0734	0902	2162A	B
2162	0823	0912	2162A	B	1N	084204	E042.0	2163	0918	1058	2163A	B
2163	1010	1058	2163A	B	1N	102920	E015.2	2164	1103	1247	2164A	B
2164	1157	1246	2164A	B		121637	W011.6	2165	1252	1429	2165A	B
2165	1345	1429	2165A	B		140353	W038.4	2166	1435	1613	2166A	B
2166	1532	1613	2166A	B		155110	W065.2	2167	1618	1757	2167A	B
2167	1719	1757	2167A	B		173826	W092.1	2168	1803	1943	2168A	B
2167	1803	1808	2168A	B				2169	1948	2126	2169A	B
2168	1906	1943	2168A	B		192543	W118.9	2170	2132	2318	2170A	B
2168	1949	1955	2169A	B	1W							
2169	2054	2127	2169A	B	1W	211259	W145.7					
2169	2132	2142	2170A	B								
2170	2241	2317	2170A	B		230016	W172.5					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
2158	0205	0301	2159R	B	1S	022633	W044.1		0205	0401	2159R	B
2159	0350	0400	2159R	B	1S	041350	W070.9		0406	0539	2160R	B
2159	0406	0448	2160R	B					0548	0729	2161A	B
2160	0549	0635	2161A	B		060106	W097.7		0734	0902	2162A	B
2161	0734	0823	2162A	B	1S	074823	W124.5		0917	1059	2163A	B
2162	0918	1010	2163A	B	1S	093539	W151.4		1103	1247	2164A	B
2163	1104	1157	2164A	B		112256	W178.2		1251	1430	2165A	B
2164	1252	1345	2165A	B		131012	E155.0		1435	1614	2166A	B
2165	1435	1532	2166A	B		145729	E128.2		1618	1757	2167A	B
2166	1621	1719	2167A	B		164445	E101.4		1802	1943	2168A	B
2167	1807	1906	2168A	B		183202	E074.5		1948	2127	2169A	B
2168	1955	2054	2169A	B	1E	201918	E047.7		2132	2318	2170A	B
2169	2142	2241	2170A	B		220635	E020.9					
2170						235351	W005.9					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
22 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	HDR S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	HDR S
DAYTIME THIR						**ASC. NODE**						
2171						004733	E160.7	2172	0118	0311	2173R	A
2172	0216	0304	2173R	A	1N	023449	E133.8	2173	0312	0458	2173R	B
2173	0403	0452	2173R	B	1N	042206	E107.0	2174	0503	0640	2174R	B
2174	0550	0639	2174R	B		060922	E080.2	2175	0650	0828	2175A	B
2175	0737	0826	2175A	B		075639	E053.4	2176	0833	1015	2176A	B
2176	0925	1013	2176A	B	1N	094355	E026.6	2177	1019	1200	2177A	B
2177	1112	1200	2177A	B		113112	W000.3	2178	1205	1345	2178A	B
2178	1259	1345	2178A	B		131828	W027.1	2179	1350	1531	2179A	B
2179	1446	1530	2179A	B		150545	W053.9	2180	1536	1715	2180A	B
2180	1634	1714	2180A	B		165301	W080.7	2181	1719	1857	2181A	B
2181	1821	1856	2181A	B	1N	184018	W107.5	2182	1902	2042	2182A	B
2181	1902	1910	2182A	B				2183	2047	2230	2183A	B
2182	2008	2041	2182A	B		202735	W134.3					
2182	2047	2057	2183A	B								
2183	2156	2229	2183A	B		221451	W161.2					
2183	2234	2244	2187R	A								
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
2171	0119	0216	2173R	A	1S	014108	W032.7	0119	0311	2173R	A	
2172	0304	0311	2173R	A	1S	032824	W059.6	0311	0458	2173R	B	
2172	0312	0403	2173R	B	1S			0503	0645	2174R	B	
2173	0452	0458	2173R	B	1S	051541	W086.4	0650	0827	2175A	B	
2173	0504	0550	2174R	B				0832	1014	2176A	B	
2174	0639	0645	2174R	B		070257	W113.2	1019	1200	2177A	B	
2174	0651	0737	2175A	B				1205	1345	2178A	B	
2175	0832	0925	2176A	B	1S	085014	W140.0	1350	1531	2179A	B	
2176	1019	1112	2177A	B		103731	W166.8	1535	1714	2180A	B	
2177	1205	1259	2178A	B		122447	E166.4	1719	1857	2181A	B	
2178	1351	1446	2179A	B		141204	E139.5	1902	2042	2182A	B	
2179	1536	1634	2180A	B		155920	E112.7	2047	2230	2183A	B	
2180	1723	1821	2181A	B	1S	174637	E085.9	2234	0033	2187R	A	
2181	1910	2008	2182A	B		193353	E059.1					
2182	2057	2156	2183A	B		212110	E032.3					
2183	2244	2343	2187R	A		230826	E005.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
23 MAY 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
2184	2343	0032	2187R	A		000208	E172.0	2184	2234	0033	2187R	A
2185						014924	E145.2	2186	0229	0415	2186R	B
2186	0317	0406	2186R	B	1N	033641	E118.4	2187	0420	0601	2187R	B
2187	0505	0554	2187R	B	1N	052357	E091.6	2188	0605	0742	2188A	B
2188	0652	0741	2188A	B		071114	E064.7	2189	0748	0929	2189A	B
2189	0839	0928	2189A	B	1N	085830	E037.9	2190	0934	1116	2190A	B
2190	1027	1115	2190A	B	1N	104547	E011.1	2191	1121	1301	2191A	B
2191	1214	1300	2191A	B		123303	W015.7	2192	1306	1446	2192A	B
2192	1401	1445	2192A	B		142020	W042.5	2193	1451	1628	2193A	B
2193	1548	1628	2193A	B		160736	W069.4	2194	1633	1813	2194A	B
2194	1736	1812	2194A	B		175453	W096.2	2195	1818	1958	2195A	B
2194	1818	1824	2195A	B				2196	2003	2146	2196A	B
2195	1923	1957	2195A	B		194210	W123.0					
2195	2003	2012	2196A	B								
2196	2110	2146	2196A	B		212926	W149.8					
2197						231643	W176.6					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
2184						005543	W021.4	0229	0415	2186R	B	
2185	0230	0317	2186R	B	1S	024259	W048.2	0420	0600	2187R	B	
2186	0406	0415	2186R	B	1S	043016	W075.0	0605	0743	2188A	B	
2186	0421	0505	2187R	B	1S			0748	0930	2189A	B	
2187	0554	0600	2187R	B	1S	061732	W101.8	0934	1116	2190A	B	
2187	0606	0652	2188A	B				1121	1301	2191A	B	
2188	0748	0839	2189A	B	1S	080449	W128.7	1306	1446	2192A	B	
2189	0935	1027	2190A	B	1S	095205	W155.5	1451	1628	2193A	B	
2190	1121	1214	2191A	B		113922	E177.7	1633	1813	2194A	B	
2191	1306	1401	2192A	B		132639	E150.9	1818	1957	2195A	B	
2192	1451	1548	2193A	B		151355	E124.1	2003	2147	2196A	B	
2193	1637	1736	2194A	B	1S	170112	E097.3					
2194	1824	1923	2195A	B		184828	E070.4					
2195	2012	2110	2196A	B		203545	E043.6					
2196						222301	E016.8					
2197						001018	W010.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
24 MAY 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID	ASC. AND DESC. NODE				INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR					ASC. NODE						
2198						010359	E156.6	2199	0134	0324	2200R	A
2199	0232	0321	2200R	A	2N	025116	E129.7	2200	0324	0507	2200R	B
2200	0419	0508	2200R	B		043832	E102.9	2201	0519	0705	2201R	B
2201	0607	0655	2201R	B	1N	062549	E076.1	2202	0711	0844	2202A	B
2202	0754	0843	2202A	B	1W	081305	E049.3	2203	0849	1031	2203A	B
2203	0941	1030	2203A	B	1N	100022	E022.5	2204	1036	1217	2204A	B
2204	1128	1217	2204A	B		114738	W004.4	2205	1223	1402	2205A	B
2205	1316	1402	2205A	B		133455	W031.2	2206	1408	1545	2206A	B
2206	1503	1545	2206A	B		152212	W058.0	2207	1550	1731	2207A	B
2207	1650	1731	2207A	B		170928	W084.8	2208	1736	1912	2208A	B
2208	1838	1912	2208A	B	1N	185645	W111.6	2209	1917	2059	2209A	B
2208	1918	1926	2209A	B				2210	2104	2246	2210A	B
2209	2025	2059	2209A	B		204401	W138.5					
2209	2105	2114	2210A	B								
2210	2212	2246	2210A	B		223118	W165.3					
2210	2251	2301	2213R	A								
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
2198	0135	0232	2200R	A	2S	015734	W036.9		0135	0324	2200R	A
2199	0325	0419	2200R	B		034451	W063.7		0325	0507	2200R	B
2200	0520	0607	2201R	B	1S	053207	W090.5		0519	0706	2201R	B
2201	0655	0705	2201R	B	1S	071924	W117.3		0711	0845	2202A	B
2201	0711	0754	2202A	B	1E				0849	1031	2203A	B
2202	0849	0941	2203A	B	1S	090640	W144.1		1036	1218	2204A	B
2203	1036	1128	2204A	B		105357	W170.9		1223	1403	2205A	B
2204	1224	1316	2205A	B		124113	E162.2		1407	1545	2206A	B
2205	1408	1503	2206A	B		142830	E135.4		1550	1731	2207A	B
2206	1552	1650	2207A	B		161546	E108.6		1736	1913	2208A	B
2207	1739	1838	2208A	B	1S	180303	E081.8		1917	2059	2209A	B
2208	1926	2025	2209A	B		195020	E055.0		2105	2246	2210A	B
2209	2114	2212	2210A	B		213736	E028.2		2251	0049	2213R	A
2210	2301	2359	2213R	A		232453	E001.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
25 MAY 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
2211	2359	0048	2213R	A		001834	E167.9	2211	2251	0049	2212R	A
2212						020551	E141.1	2213	0244	0431	2213R	B
2213	0334	0423	2213R	B		035307	E114.3	2214	0437	0616	2214R	B
2214	0521	0610	2214R	B		054024	E087.5	2215	0622	0758	2215A	B
2215	0709	0757	2215A	B		072740	E060.6	2216	0803	0944	2216A	B
2216	0856	0944	2216A	B	1N	091457	E033.8	2217	0950	1131	2217A	B
2217	1043	1131	2217A	B	1N	110213	E007.0	2218	1136	1318	2218A	B
2218	1230	1319	2218A	B		124930	W019.8	2219	1323	1502	2219A	B
2219	1418	1501	2219A	B		143647	W046.7	2220	1507	1644	2220A	B
2220	1605	1645	2220A	B	1N	162403	W073.5	2221	1651	1830	2221A	B
2221	1752	1830	2221A	B	1N	181120	W100.3	2222	1836	2014	2222A	B
2221	1836	1841	2222A	B				2223	2020	2201	2223A	B
2222	1939	2014	2222A	B		195836	W127.1					
2222	2020	2028	2223A	B	1N							
2223	2127	2201	2223A	B	1N	214553	W153.9					
2224						233309	E179.3					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
2211						011209	W025.5	0245	0431	2213R	B	
2212	0245	0334	2213R	B		025926	W052.3	0437	0617	2214R	B	
2213	0423	0431	2213R	B		044642	W079.1	0622	0759	2215A	B	
2213	0437	0521	2214R	B				0803	0945	2216A	B	
2214	0610	0616	2214R	B		063359	W106.0	0950	1131	2217A	B	
2214	0622	0709	2215A	B				1136	1318	2218A	B	
2215	0803	0856	2216A	B	1S	082115	W132.8	1323	1502	2219A	B	
2216	0950	1043	2217A	B	1S	100832	W160.0	1507	1645	2220A	B	
2217	1136	1230	2218A	B		115548	E173.6	1651	1831	2221A	B	
2218	1324	1418	2219A	B		134305	E146.8	1835	2015	2222A	B	
2219	1507	1605	2220A	B	1S	153021	E120.0	2020	2201	2223A	B	
2220	1654	1752	2221A	B	1S	171738	E093.1					
2221	1841	1939	2222A	B		190454	E066.3					
2222	2028	2127	2223A	B	1S	205211	E039.5					
2223						223928	E012.7					
2224	0006	0101	2227R	A		002644	W014.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
26 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
2225	0101	0150	2227R	A		012026	E152.4	2225	0006	0201	2226R	A
2226	0249	0337	2226R	B	1N	030742	E125.6	2226	0153	0348	2226R	B
2227	0436	0525	2227R	B		045459	E098.8	2227	0354	0530	2227R	B
2228	0623	0712	2228R	B	1N	064215	E072.0	2228	0536	0719	2228R	B
2229	0810	0859	2229A	B		082932	E045.2	2229	0725	0900	2229A	B
2230	0958	1046	2230A	B		101648	E018.3	2230	0905	1045	2230A	B
2231	1145	1234	2231A	B		120405	W008.5	2231	1051	1234	2231A	B
2232	1332	1419	2232A	B	1N	135122	W035.3	2232	1239	1419	2232A	B
2233	1520	1604	2233A	B		153838	W062.1	2233	1425	1604	2233A	B
2234	1707	1746	2234A	B		172555	W089.0	2234	1609	1746	2234A	B
2235	1854	1928	2235A	B	1N	191311	W115.8	2235	1751	1928	2235A	B
2235	1934	1943	2236A	B				2236	1933	2116	2236A	B
2236	2041	2116	2236A	B		210028	W142.6	2237	2122	2303	2237A	B
2236	2122	2130	2237A	B								
2237	2229	2303	2237A	B		224744	W169.4					
2237	2307	2317	2240R	A								
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
2225	0150	0201	2227R	A		021401	W041.0		0006	0201	2227R	A
2225	0153	0249	2226R	B	1S				0153	0349	2226R	B
2226	0337	0349	2226R	B	1S	040117	W067.8		0354	0530	2227R	B
2226	0355	0436	2227R	B					0536	0719	2228R	B
2227	0525	0530	2227R	B		054834	W094.6		0725	0901	2229A	B
2227	0536	0623	2228R	B	1S				0905	1046	2230A	B
2228	0712	0719	2228R	B	1S	073550	W121.4		1051	1234	2231A	B
2228	0725	0810	2229A	B					1239	1419	2232A	B
2229	0910	0958	2230A	B		092307	W148.2		1425	1605	2233A	B
2230	1051	1145	2231A	B		111023	W175.1		1609	1746	2234A	B
2231	1239	1332	2232A	B	1S	125740	E158.1		1751	1928	2235A	B
2232	1425	1520	2233A	B		144456	E131.3		1933	2117	2236A	B
2233	1609	1707	2234A	B		163213	E104.5		2122	2304	2237A	B
2234	1756	1854	2235A	B	1S	181929	E077.7		2307	0105	2240R	A
2235	1943	2041	2236A	B		200646	E050.9					
2236	2130	2229	2237A	B		215402	E024.0					
2237	2317	0016	2240R	A		234119	W002.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
27 MAY 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID	ASC. AND DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR					ASC. NODE						
2238	0016	0105	2240R	A		003501	E163.8	2238	2307	0105	2240R	A
2239						022217	E137.0	2240	0300	0446	2240R	B
2240	0350	0439	2240R	B		040934	E110.2	2241	0452	0635	2241R	B
2241	0538	0627	2241R	B		055650	E083.3	2242	0641	0814	2242A	B
2242	0725	0814	2242A	B		074407	E056.5	2243	0820	1002	2243A	B
2243	0912	1001	2243A	B	1N	093124	E029.7	2244	1008	1148	2244A	B
2244	1100	1148	2244A	B		111840	E002.9	2245	1153	1334	2245A	B
2245	1247	1334	2245A	B	1N	130557	W023.9	2246	1339	1517	2246A	B
2246	1434	1517	2246A	B		145313	W050.8	2247	1523	1700	2247A	B
2247	1621	1700	2247A	B		164030	W077.6	2248	1706	1844	2248A	B
2248	1809	1844	2248A	B	1N	182746	W104.4	2249	1850	2032	2249A	B
2248	1850	1858	2249A	B				2250	2043	2217	2250A	B
2249	1956	2031	2249A	B		201503	W131.2					
2249	2037	2045	2250A	B								
2250	2143	2217	2250A	B		220219	W158.0					
2251						234936	E175.2					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
2238						012835	W029.6	0301	0447	2240R	B	
2239	0301	0350	2240R	B		031552	W056.4	0452	0635	2241R	B	
2240	0439	0446	2240R	B		050309	W083.2	0641	0815	2242A	B	
2240	0452	0538	2241R	B				0819	1002	2243A	B	
2241	0627	0635	2241R	B		065025	W110.1	1007	1148	2244A	B	
2241	0641	0725	2242A	B				1153	1335	2245A	B	
2242	0820	0912	2243A	B	1S	083742	W136.9	1339	1517	2246A	B	
2243	1008	1100	2244A	B		102458	W163.7	1522	1701	2247A	B	
2244	1153	1247	2245A	B	1S	121215	E169.5	1706	1845	2248A	B	
2245	1340	1434	2246A	B		135931	E142.7	1850	2032	2249A	B	
2246	1523	1621	2247A	B		154648	E115.9	2037	2218	2250A	B	
2247	1710	1809	2248A	B	1S	173404	E089.0					
2248	1858	1956	2249A	B		192121	E062.2					
2249	2045	2143	2250A	B		210837	E035.4					
2250						225554	E008.6					
2251	0022	0118	2254R	A		004310	W018.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
28 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
2252	0118	0207	2254R	A		013652	E148.4	2255	0553	0729	2255A	B
2253	0305	0354	2254R	B	1N	032409	E121.5	2256	0734	0916	2256A	B
2254						051125	E094.7	2257	0921	1102	2257A	B
2255	0640	0728	2255A	B		065842	E067.9	2258	1107	1248	2258A	B
2256	0827	0916	2256A	B		084559	E041.1	2259	1253	1433	2259A	B
2257	1014	1101	2257A	B	1N	103315	E014.2	2260	1438	1617	2260A	B
2258	1202	1248	2258A	B		122032	W012.6	2261	1622	1801	2261A	B
2259	1349	1433	2259A	B		140748	W039.4	2262	1806	1945	2262A	B
2260	1536	1616	2260A	B	1N	155505	W066.2	2263	1951	2130	2263A	B
2261	1723	1800	2261A	B	1N	174221	W093.0	2264	2136	2335	2264A	B
2261	1806	1812	2262A	B								
2262	1911	1945	2262A	B		192938	W119.9					
2262	1951	1959	2263A	B								
2263	2058	2135	2263A	B		211654	W146.7					
2263	2136	2147	2269A	A								
2264	2245	2334	2269A	A		230411	W173.5					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
2252	0207	0216	2254R	A		023027	W045.1		0022	0217	2254R	A
2252	0218	0305	2254R	B	1S				0554	0730	2255A	B
2253	0354	0417	2254R	B	1S	041743	W071.9		0735	0917	2256A	B
2254	0553	0640	2255A	B		060500	W098.7		0922	1103	2257A	B
2255	0734	0827	2256A	B		075216	W125.5		1106	1248	2258A	B
2256	0921	1014	2257A	B	1S	093933	W152.3		1253	1433	2259A	B
2257	1107	1202	2258A	B		112650	W179.2		1438	1617	2260A	B
2258	1254	1349	2259A	B		131406	E154.0		1622	1801	2261A	B
2259	1438	1536	2260A	B	1S	150123	E127.2		1806	1946	2262A	B
2260	1625	1723	2261A	B	1S	164839	E100.4		1951	2135	2263A	B
2261	1812	1911	2262A	B		183556	E073.6		2135	2335	2267R	A
2262	1959	2058	2263A	B		202312	E046.8					
2263	2147	2245	2269A	A		221029	E019.9					
2264						235745	W006.9					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
29 MAY 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE					INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
2265						005127	E159.7	2267	0314	0516	2268R	B
2266						023844	E132.9	2270	0835	1017	2270A	B
2267	0407	0456	2269A	B		042600	E106.0	2271	1022	1203	2271A	B
2268						061317	E079.2	2272	1209	1349	2272A	B
2269						080034	E052.4	2273	1355	1533	2273A	B
2270	0929	1017	2270A	B	1N	094750	E025.6	2274	1540	1717	2274A	B
2271	1116	1204	2271A	B		113507	W001.2	2275	1723	1901	2275A	B
2272	1303	1349	2272A	B		132223	W028.1	2276	1908	2046	2276A	B
2273	1451	1533	2273A	B		150940	W054.9	2277	2051	2233	2277A	B
2274	1638	1717	2274A	B	2N	165656	W081.7					
2275	1825	1901	2275A	B	1N	184413	W108.5					
2275	1908	1914	2276A	B								
2276	2013	2045	2276A	B		203129	W135.3					
2276	2051	2101	2277A	B								
2277	2200	2233	2277A	B		221846	W162.1					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
2265						014502	W033.7	0314	0517	2267R	B	
2266	0315	0407	2269A	B		033218	W060.5	0835	1017	2270A	B	
2267	0456	0516	2269A	B		051935	W087.4	1022	1204	2271A	B	
2268						070651	W114.2	1209	1350	2272A	B	
2269	0835	0929	2270A	B	1S	085408	W141.0	1355	1534	2273A	B	
2270	1023	1116	2271A	B		104124	W167.8	1540	1718	2274A	B	
2271	1209	1303	2272A	B		122841	E165.4	1723	1902	2275A	B	
2272	1355	1451	2273A	B		141557	E138.6	1908	2046	2276A	B	
2273	1540	1638	2274A	B	2S	160314	E111.8	2051	2234	2277A	B	
2274	1727	1825	2275A	B	1S	175031	E084.9					
2275	1914	2013	2276A	B		193747	E058.1					
2276	2101	2200	2277A	B		212504	E031.3					
2277						231220	E004.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
30 MAY 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
2278						000602	E171.1	2279	0038	0233	2280R	A
2279	0134	0223	2280R	A	1N	015319	E144.2	2280	0233	0418	2280R	B
2280	0322	0410	2280R	B		034036	E117.4	2281	0423	0615	2282A	B
2281	0509	0558	2282A	B	1N	052752	E090.6	2282	0606	0752	2283A	A
2282	0656	0745	2283A	A		071509	E063.8	2283	0752	0929	2283A	B
2283	0843	0930	2283A	B	1N	090225	E037.0	2284	0937	1118	2284A	B
2284	1031	1118	2284A	B	1N	104942	E010.1	2285	1124	1306	2285A	B
2285	1218	1306	2285A	B		123658	W016.7	2286	1311	1449	2286A	B
2286	1405	1449	2286A	B	1W	142415	W043.5	2287	1454	1633	2287A	B
2287	1553	1633	2287A	B		161131	W070.3	2288	1638	1816	2288A	B
2288	1740	1816	2288A	B	1N	175848	W097.1	2289	1821	2003	2289A	B
2288	1822	1829	2289A	B				2290	2008	2148	2290A	B
2289	1927	2002	2289A	B		194604	W124.0	2291	2152	2350	2291A	B
2289	2008	2016	2290A	B	1W							
2290	2114	2148	2290A	B	1W	213321	W150.8					
2290	2152	2203	2294R	A								
2291	2302	2350	2294R	A		232038	W177.6					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
2278	0038	0134	2280R	A	1S	005937	W022.3	0038	0233	2280R	A	
2279	0223	0232	2280R	A	1S	024653	W049.2	0233	0418	2280R	B	
2279	0234	0322	2280R	B				0423	0615	2283A	B	
2280	0410	0418	2280R	B		043410	W076.0	0606	0752	2283A	A	
2280	0424	0509	2282A	B	1S			0752	0929	2282A	B	
2281	0558	0615	2282A	B	1S	062126	W102.8	0935	1119	2284A	B	
2281	0606	0656	2283A	A				1123	1306	2285A	B	
2282	0745	0752	2283A	A		080843	W129.6	1311	1449	2286A	B	
2282	0752	0843	2283A	B	1S			1454	1633	2287A	B	
2283	0935	1031	2284A	B	1S	095559	W156.4	1638	1816	2288A	B	
2284	1124	1218	2285A	B		114316	E176.7	1821	2001	2289A	B	
2285	1312	1405	2286A	B	1E	133032	E149.9	2008	2146	2290A	B	
2286	1455	1553	2287A	B		151749	E123.1	2151	2350	2294R	A	
2287	1641	1740	2288A	B	1S	170505	E096.3					
2288	1829	1927	2289A	B		185222	E069.5					
2289	2016	2114	2290A	B	1E	203938	E042.6					
2290	2203	2302	2294R	A		222655	E015.8					
2291						001412	W011.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
31 MAY 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
2292						010754	E155.6	2294	0329	0518	2294R	B
2293						025511	E128.8	2295	0523	0706	2296A	A
2294	0424	0512	2294R	B		044227	E101.9	2296	0708	0849	2296A	B
2295	0611	0700	2296A	B	1N	062944	E075.1	2297	0852	1033	2297A	B
2296	0758	0847	2296A	A		081700	E048.3	2298	1038	1220	2298A	B
2297	0945	1032	2297A	B	1N	100417	E021.5	2299	1225	1405	2299A	B
2298	1133	1219	2298A	B		115133	W005.3	2300	1410	1548	2300A	B
2299	1320	1406	2299A	B	2N	133850	W032.2	2301	1553	1735	2301A	B
2300	1507	1548	2300A	B		152606	W059.0	2302	1739	1915	2302A	B
2301	1654	1734	2301A	B		171323	W085.8	2303	1921	2102	2303A	B
2302	1842	1915	2302A	B	1N	190939	W112.6	2304	2109	2251	2304A	B
2302	1921	1931	2303A	B	1N							
2303	2029	2103	2303A	B	1N	204756	W139.4					
2303	2110	2118	2304A	B								
2304	2216	2251	2304A	B		223512	W166.3					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
2292						020128	W037.8		0329	0518	2294R	B
2293	0329	0424	2294R	B		034845	W064.6		0523	0707	2296A	B
2294	0512	0518	2294R	B		053601	W091.5		0707	0850	2296A	A
2294	0524	0611	2296A	B	1S				0850	1033	2297A	B
2295	0700	0706	2296A	B	1S	072318	W118.3		1038	1220	2298A	B
2295	0708	0758	2296A	A					1225	1405	2299A	B
2296	0851	0945	2297A	B	1S	091034	W145.1		1410	1548	2300A	B
2297	1038	1133	2298A	B		105751	W171.9		1553	1734	2301A	B
2298	1226	1320	2299A	B	2S	124507	E161.3		1739	1915	2302A	B
2299	1410	1507	2300A	B		143224	E134.5		1921	2103	2303A	B
2300	1556	1654	2301A	B		161940	E107.7		2109	2251	2304A	B
2301	1743	1842	2302A	B	1S	180657	E080.8					
2302	1931	2029	2303A	B	1S	195413	E054.0					
2303	2118	2216	2304A	B		214130	E027.2					
2304						232846	E000.4					

SECTION 3

ELECTRICALLY SCANNING MICROWAVE RADIOMETER DISPLAYS

One ESMR display per day has been selected for presentation in this section. All ESMR coverage times are listed in the Data Availability On-Off Times (Table 2-2). Each display contains the following items:

Nimbus 5 ESMR

This identifies the satellite (Nimbus 5) and the experiment (ESMR).

Date

This identifies the Greenwich day, month, and year the data is recorded.

Data Orbit

This data orbit number identifies only the last data orbit on each display. Usually parts of two data orbits are on the same display, since all data acquired during each satellite interrogation is presented on one 4 × 5-inch negative. In general, nighttime data is on the left and daytime data is on the right.

Program

No Program number is identified on these displays. Its intended use was to identify the appropriate table which would list the temperature interval for each gray level in the gray scale. The program used during this catalog period (and during the first two catalog periods) is listed in Table 3-1.

Gray Scale

A single 11-step gray scale serves to define ESMR brightness temperatures in all three swaths, by the assignment of a different brightness temperature range to each step for each swath. Table 3-1 defines the gray scale table used during all catalog periods.

Image Swaths (1, 2, 3)

A set of three swaths, labeled 1, 2, and 3, separates the same recorded data into three temperature intervals (defined in Table 3-1). The right set of three swaths is a continuation of the left set and is offset because of the limitations of the 4 × 5-inch film format. The three swath presentation is used because it shortens the temperature ranges spanned by

TABLE 3-1

ESMR GRAY SCALE STEPS VERSUS BRIGHTNESS TEMPERATURE FOR EACH OF THE THREE ESMR SWATHS IN THE ESMR PICTORIAL DISPLAYS
(Temperatures in °K)

		TABLE 1 Orbit 104 through 502			TABLE 2 Orbit 503 through 2304		
Swath		1	2	3	1	2	3
Gray Scale Number							
(black)	1	>200	>262	>280	>210	>266	>290
	2	190-200	256-262	277-280	202-210	258-266	286-290
	3	180-190	250-256	274-277	194-202	250-258	282-286
	4	170-180	240-250	271-274	186-194	242-250	278-282
	5	160-170	230-240	268-271	178-186	234-242	274-278
	6	150-160	220-230	265-268	170-178	226-234	270-274
	7	140-150	210-220	262-265	162-170	218-226	266-270
	8	130-140	200-210	259-262	154-162	210-218	262-266
	9	120-130	190-200	256-259	146-154	202-210	258-262
	10	110-120	180-190	253-256	138-146	194-202	254-258
(white)	11	<110	<180	< 253	<138	<194	<254

each step of the gray scale, and, therefore, permits discrimination of various meteorological and terrestrial phenomena.

Significant in swath 1 are the areas of atmospheric moisture and rainfall over oceans. Swath 2 brightness temperature range discriminates between new and multi-year ice and, over oceans, shows only rainfall areas. The high brightness temperatures of swath 3 outline some land areas of high soil moisture content or snow cover, but oceans lose almost all their temperature contrasts. (The swath 3 information was lost between orbit 1062 (28 February 1973) and orbit 2250 (27 May) because of an instrument malfunction.)

Time Code Index

The Time Code Index, in hours and minutes (GMT), is adjacent to the gray scale. The top number in each set is for the left group of three swaths; the bottom number in each set is for the right group of three swaths. Time bars are spaced at five-minute intervals. The same time bars are used for the left and right swaths. The top or bottom time code index determines the time for each time bar.

Grids

Two grids, labeled GRID L and GRID R; identify the geographic coordinates for the imagery of the left (L) and the right (R) sets of swaths, respectively. Latitude lines are spaced at 10-degree intervals. Longitude lines are spaced at 10-degree intervals to 60 degrees north and south of the equator, and at 20-degree intervals from 60 to 80 degrees north and south. The equator (EQ), North Pole (NP), and South Pole (SP) are labeled, as well as longitude values at the equator and at 30 and 60 degrees north and south of the equator.

Swath Display Program

The antenna gain function is different at each beam position. Thus, to present a uniform surface temperature as the same shade of gray across a scan track requires that the output voltage at each antenna position be adjusted for its beam position and output voltage value. If the corrections are not precise, vertical bands will be evident in the ESMR pictorial displays.

Three different sets of calibration constants (Display Format Programs) were used during the first two months of operation to eliminate these vertical bands. Two additional programs were used during the second and third catalog periods, after the instrument malfunction of 28 February 1973. Volume 1 of this catalog series illustrates the vertical banding produced by the first three programs, while the images in this section illustrate the banding produced by the last two. Table 3-2 shows when each program was used. Two gray scales versus brightness temperature tables have been used as shown in Table 3-2, with values for each shown in Table 3-1.

The brightness temperature accuracy varied with each Display Format Program. With display Program 1, which uses prelaunch calibration constants, the digital brightness temperature values have about ±20°K accuracy. With a change to postlaunch calibration constants, Programs 2 and 4 produce about ±2° to 5°K temperature value accuracies. Of course, with Programs 2 and 4, the displayed temperature values are accurate only within the limits of the temperature range of each step of

the gray scales as defined in Table 3-1. Display Programs 5 and 6, used after the instrument malfunction of 28 February 1973, are considered to produce ±10°K temperature accuracies on the image displays.

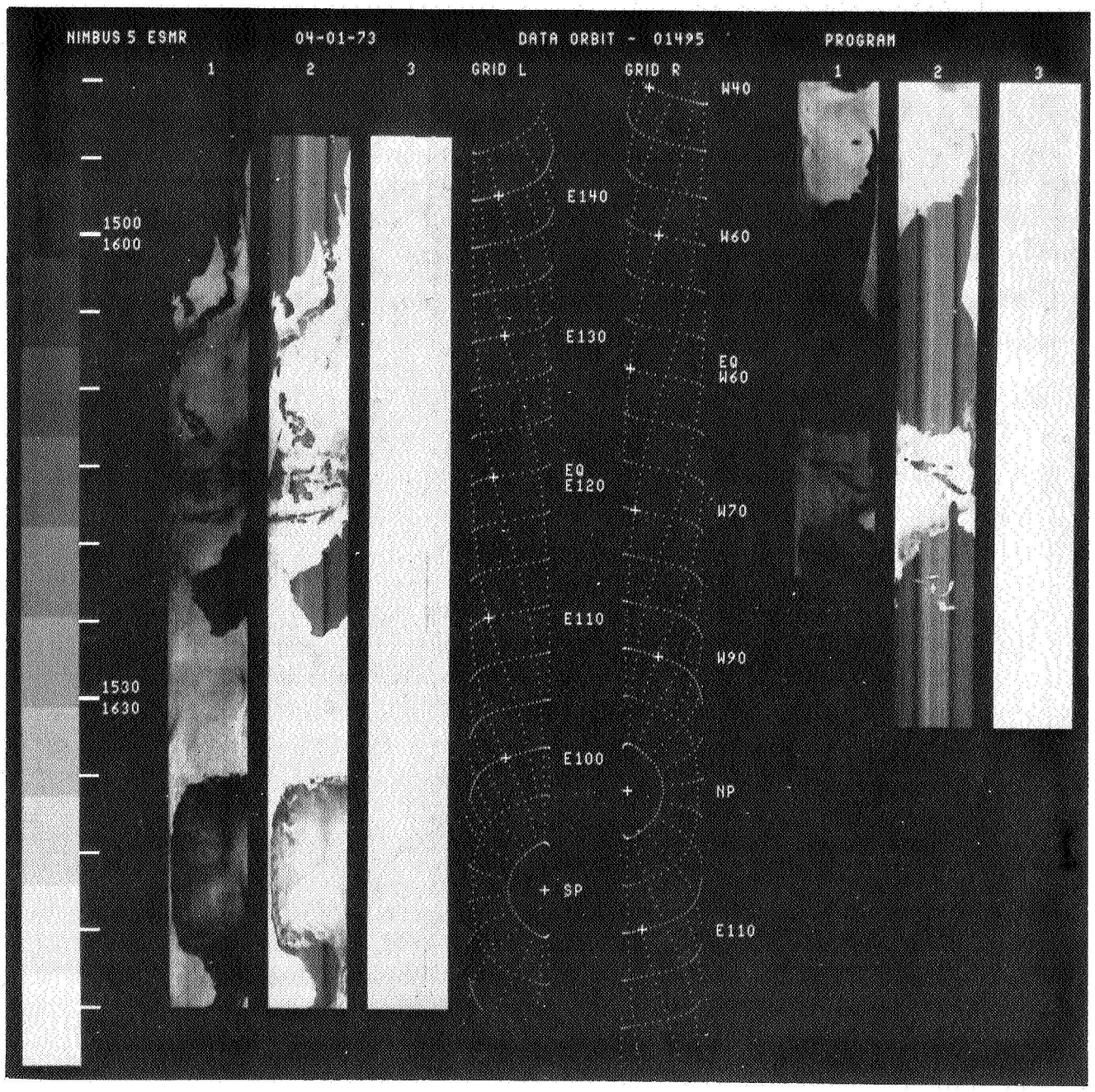
A description of the ESMR experiment may be found in The Nimbus 5 User's Guide, Section 4, and instructions for ordering the data both pictorial and digital are in Section 1.7 of that Guide.

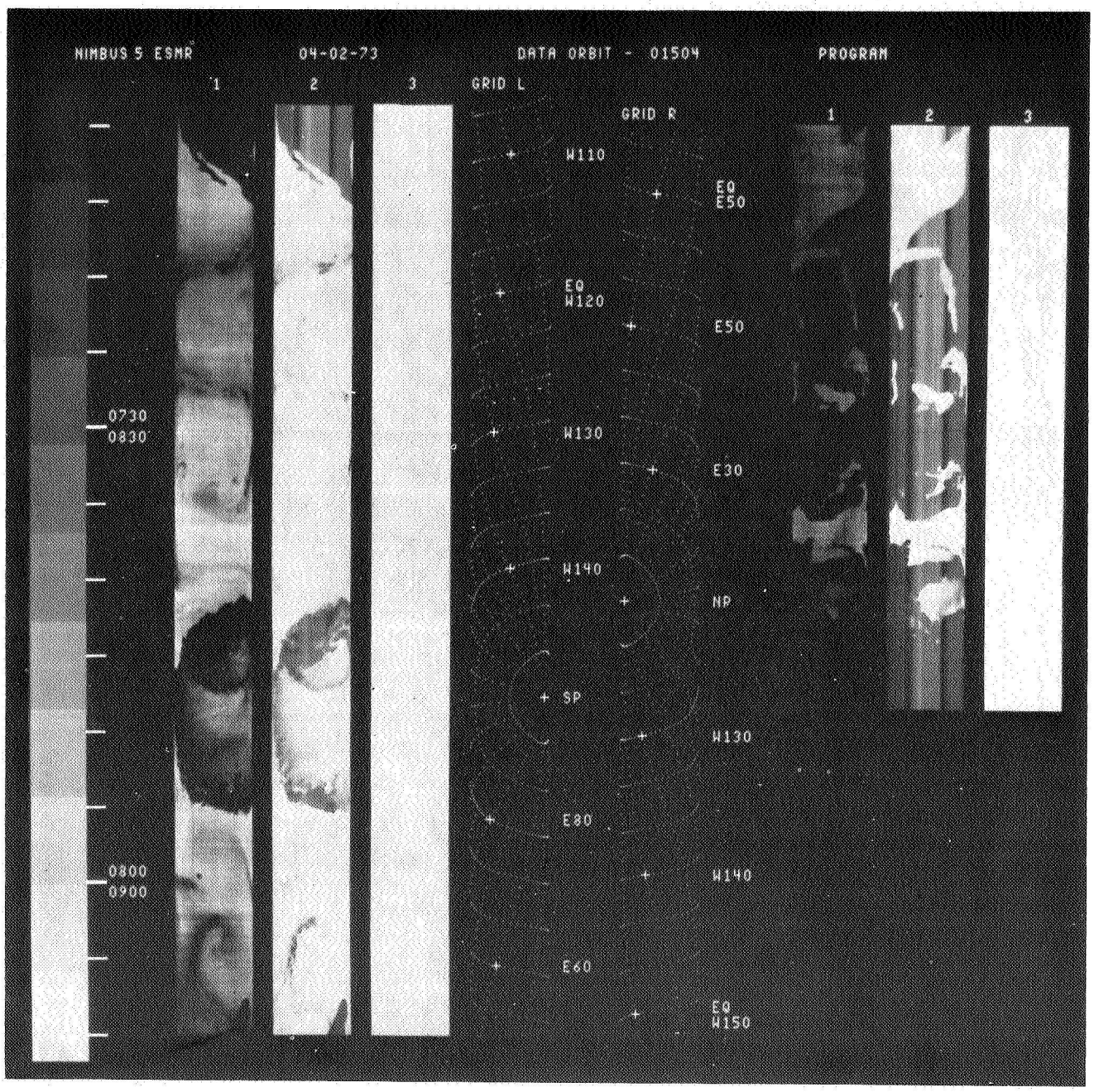
TABLE 3-2

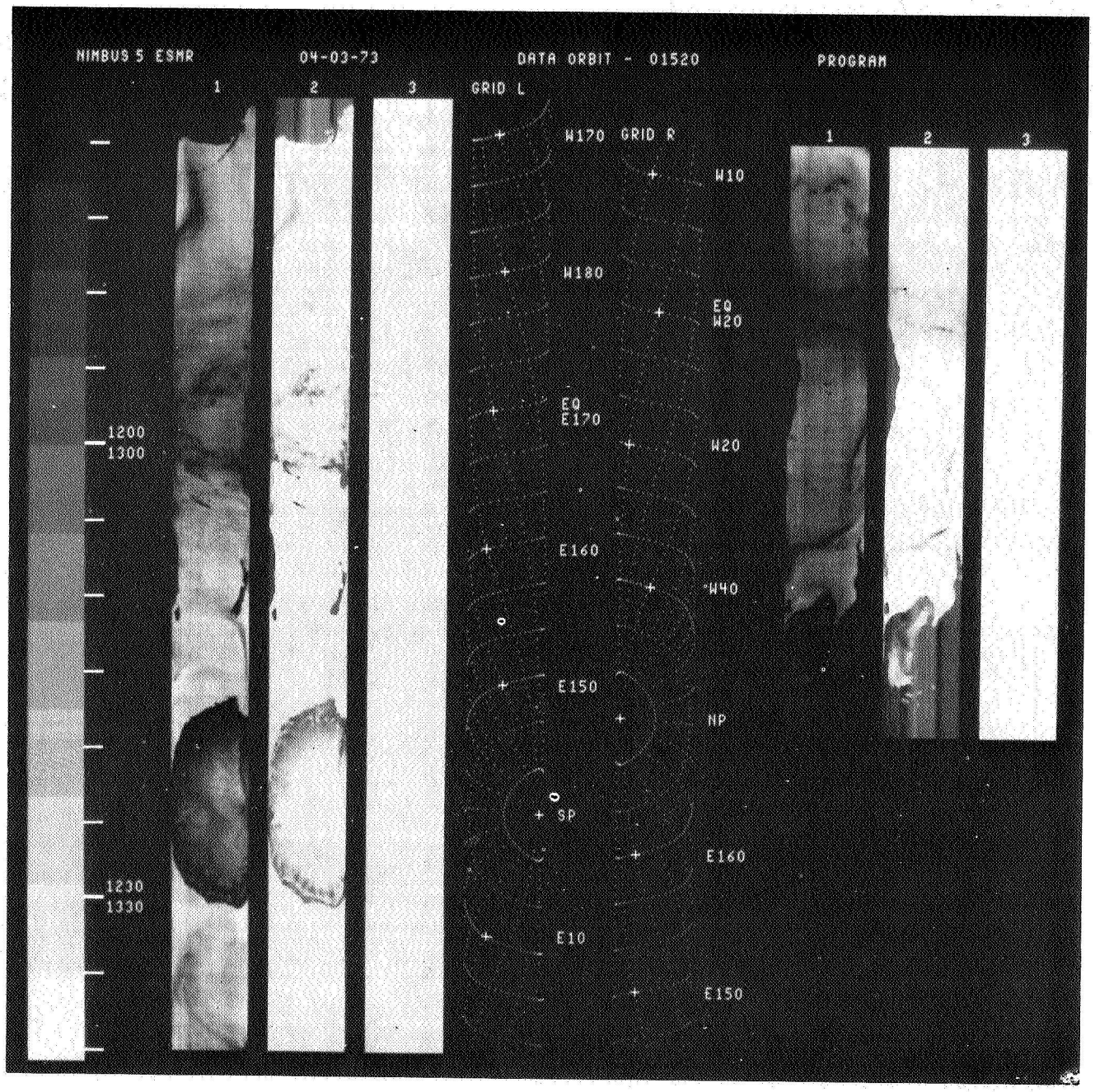
ESMR DISPLAY FORMAT AND GRAY SCALE
BRIGHTNESS TEMPERATURE PROGRAMS

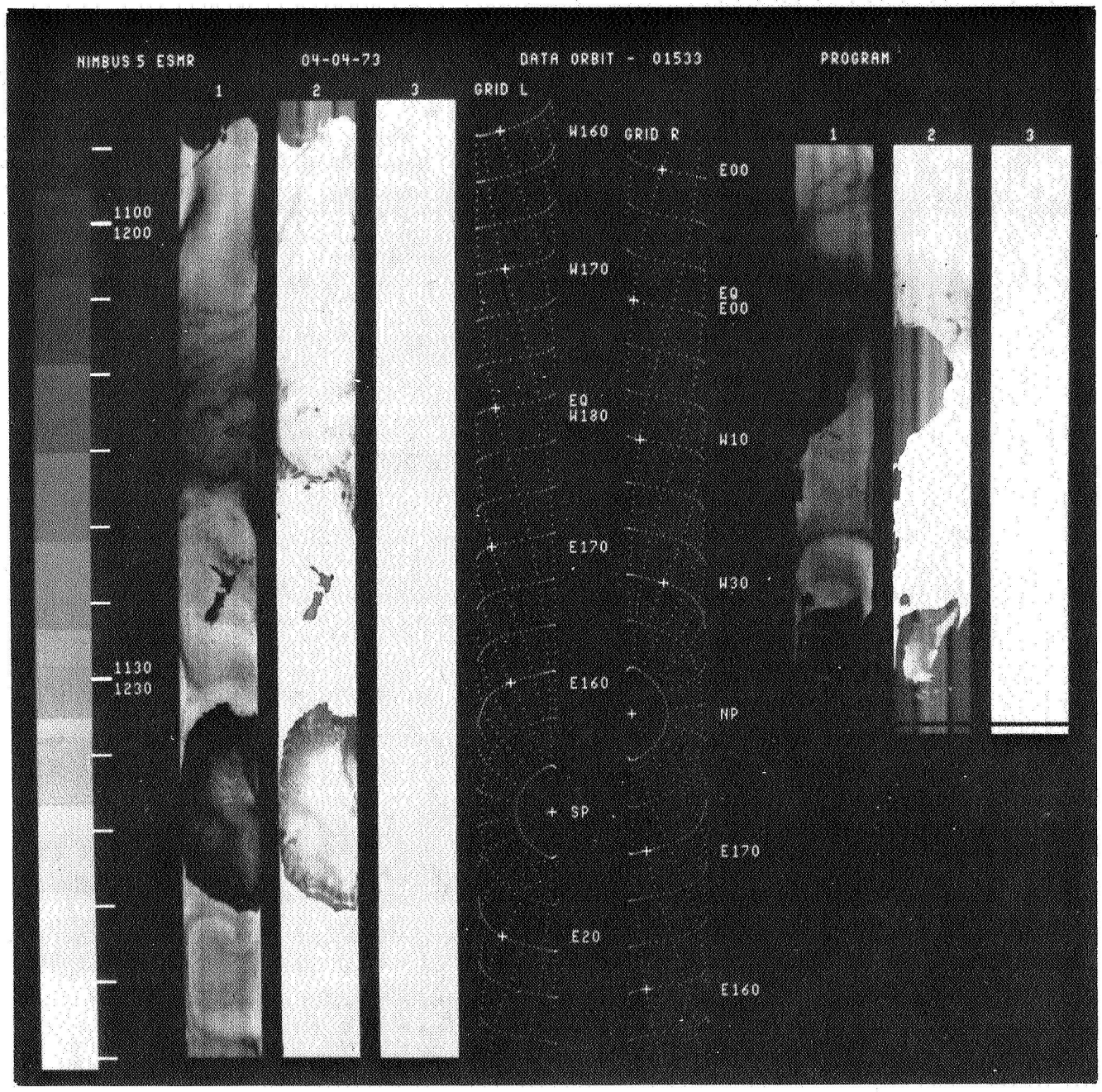
Date	Orbit	Display Format Program	Gray Scale Brightness Temperature Table
19 Dec - 17 Jan	104-502	1	1
17 Jan - 22 Jan	503-566*	2	2
22 Jan - 28 Feb	567-1062	4	2
28 Feb - 5 Mar	1063-1129	5	2
5 Mar	1130	6	2
5 Mar	1131-1134	5	2
5 Mar - 27 May	1135-2250	6	2
27 May - 31 May	2251-2304	5	2

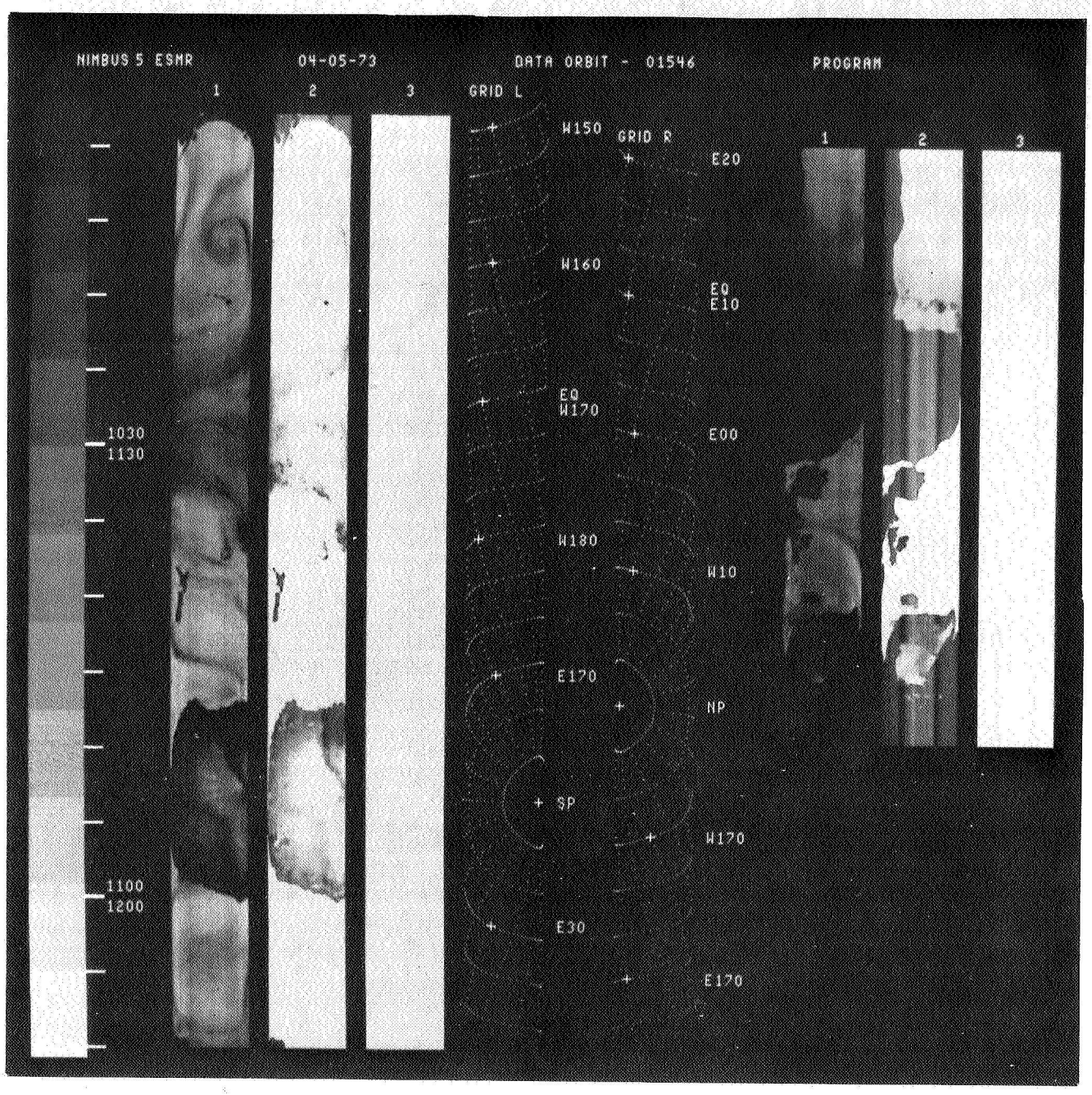
*550 & 551, Display Format 4

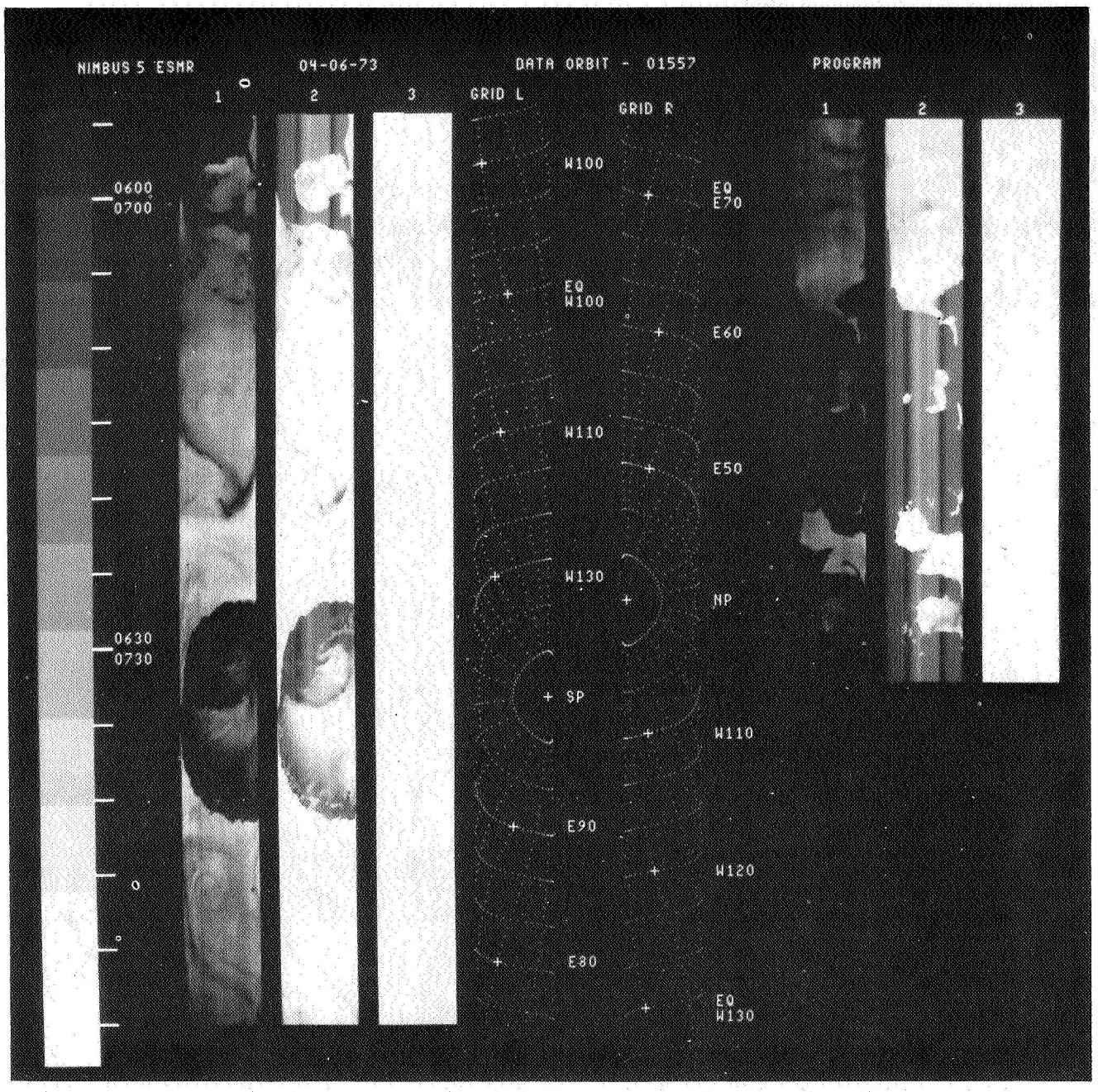

NIMBUS 5 ESMR
04-01-73
DATA ORBIT - 01495
PROGRAM
1
2
3
GRID L
GRID R
W40
E140
W60
E130
EQ
W60
EQ
E120
W70
E110
W90
E100
NP
SP
E110
1500
1600
1530
1630

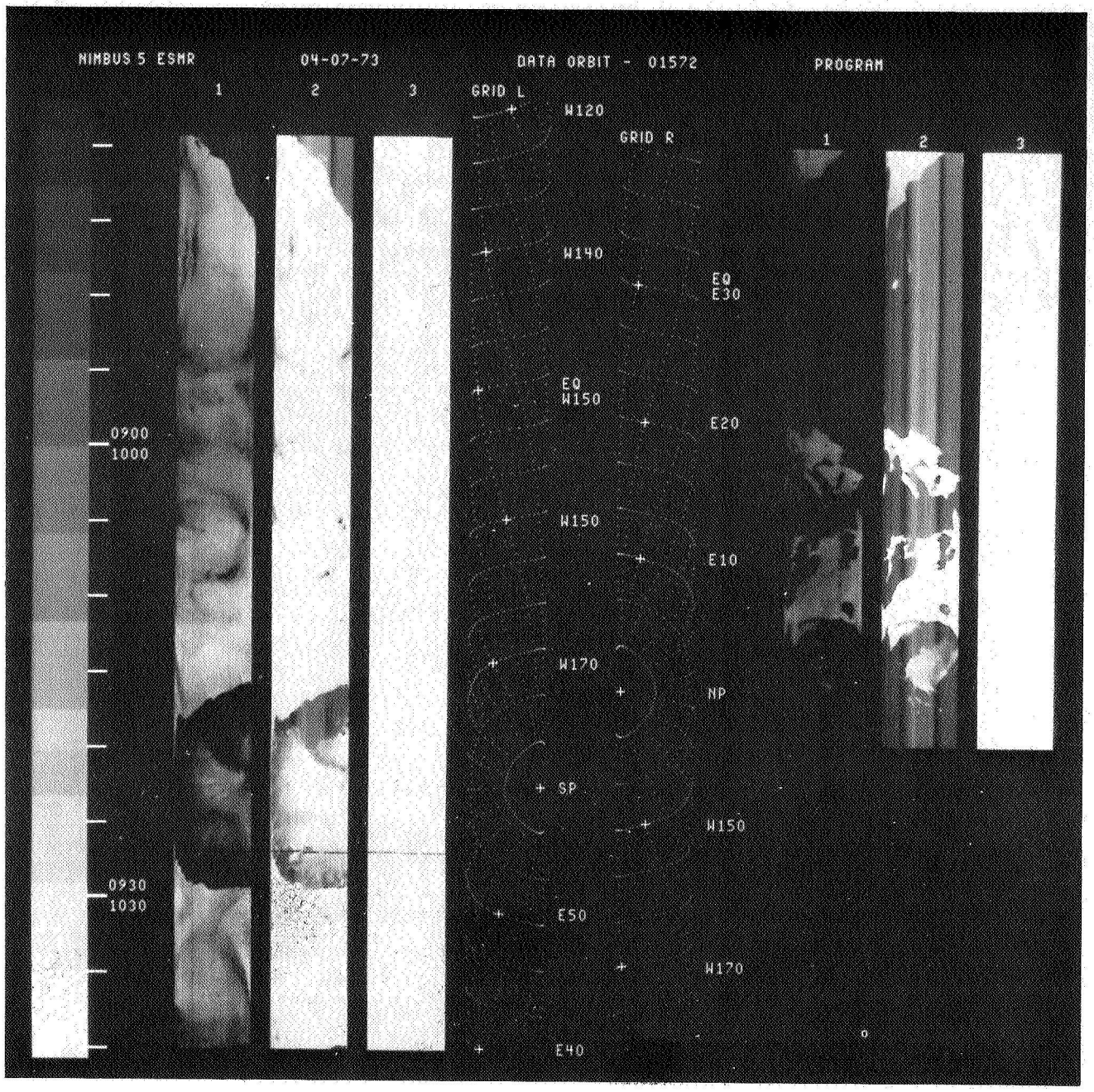

NIMBUS 5 ESMR
04-02-73
DATA ORBIT - 01504
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W110
EQ
E50
EQ
W120
E50
W130
E30
W140
NP
SP
W130
E80
W140
E60
EQ
W150
0730
0830
0800
0900

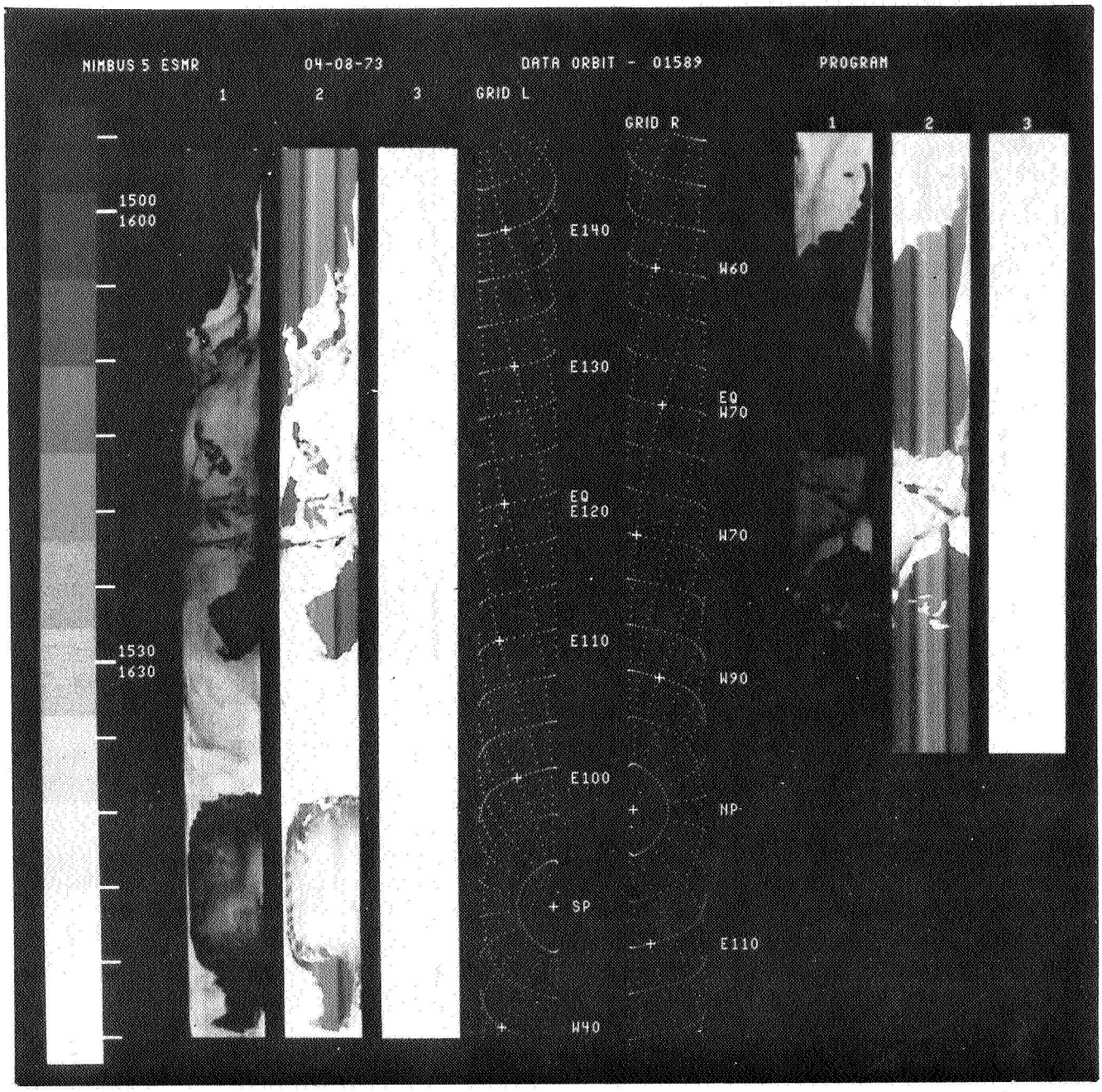

NIMBUS 5 ESMR
04-03-73
DATA ORBIT - 01520
PROGRAM
1
2
3
GRID L
W170
GRID R
W10
W180
EQ
W20
EQ
E170
W20
E160
W40
E150
NP
SP
E160
E10
E150
1200
1300
1230
1330

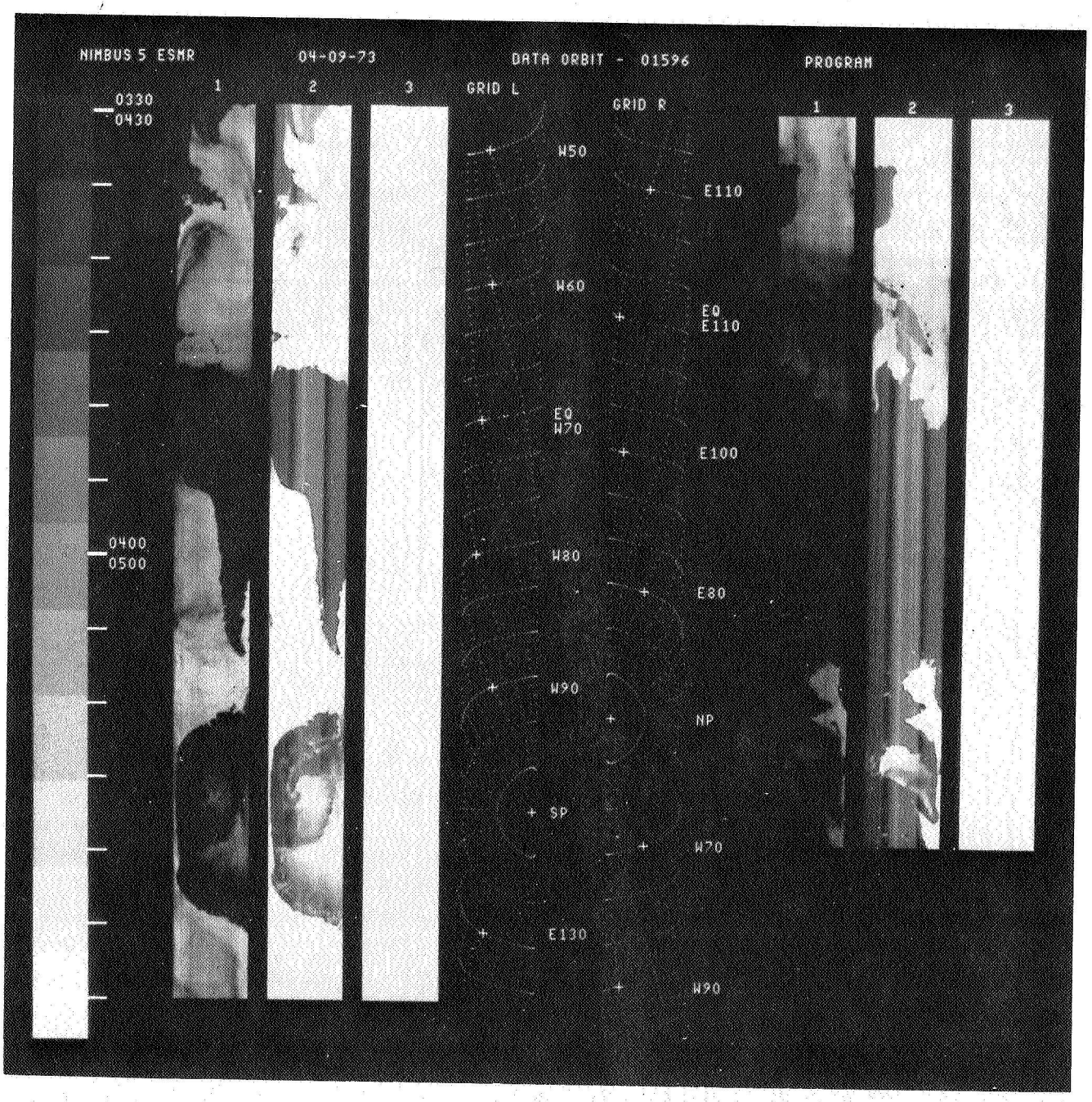

NIMBUS 5 ESMR
04-04-73
DATA ORBIT - 01533
PROGRAM
1
2
3
GRID L
GRID R
1100
1200
1130
1230
W160
E00
W170
EQ
E00
EQ
W180
W10
E170
W30
E160
NP
SP
E170
E20
E160

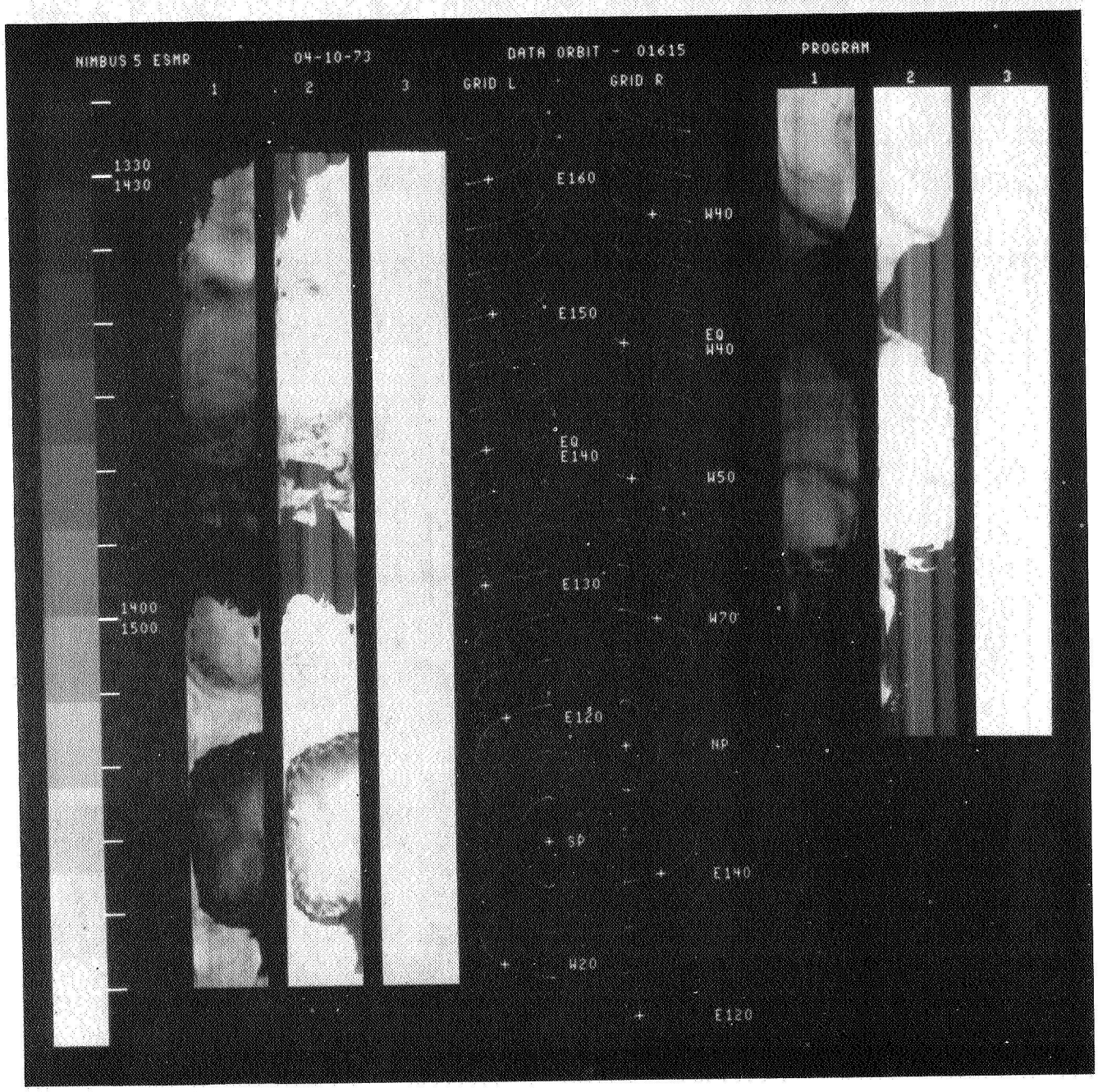

NIMBUS 5 ESMR
04-05-73
DATA ORBIT - 01546
PROGRAM
1
2
3
GRID L
GRID R
1030
1130
1100
1200
W150
E20
W160
EQ
E10
EQ
W170
E00
W180
W10
E170
NP
SP
W170
E30
E170

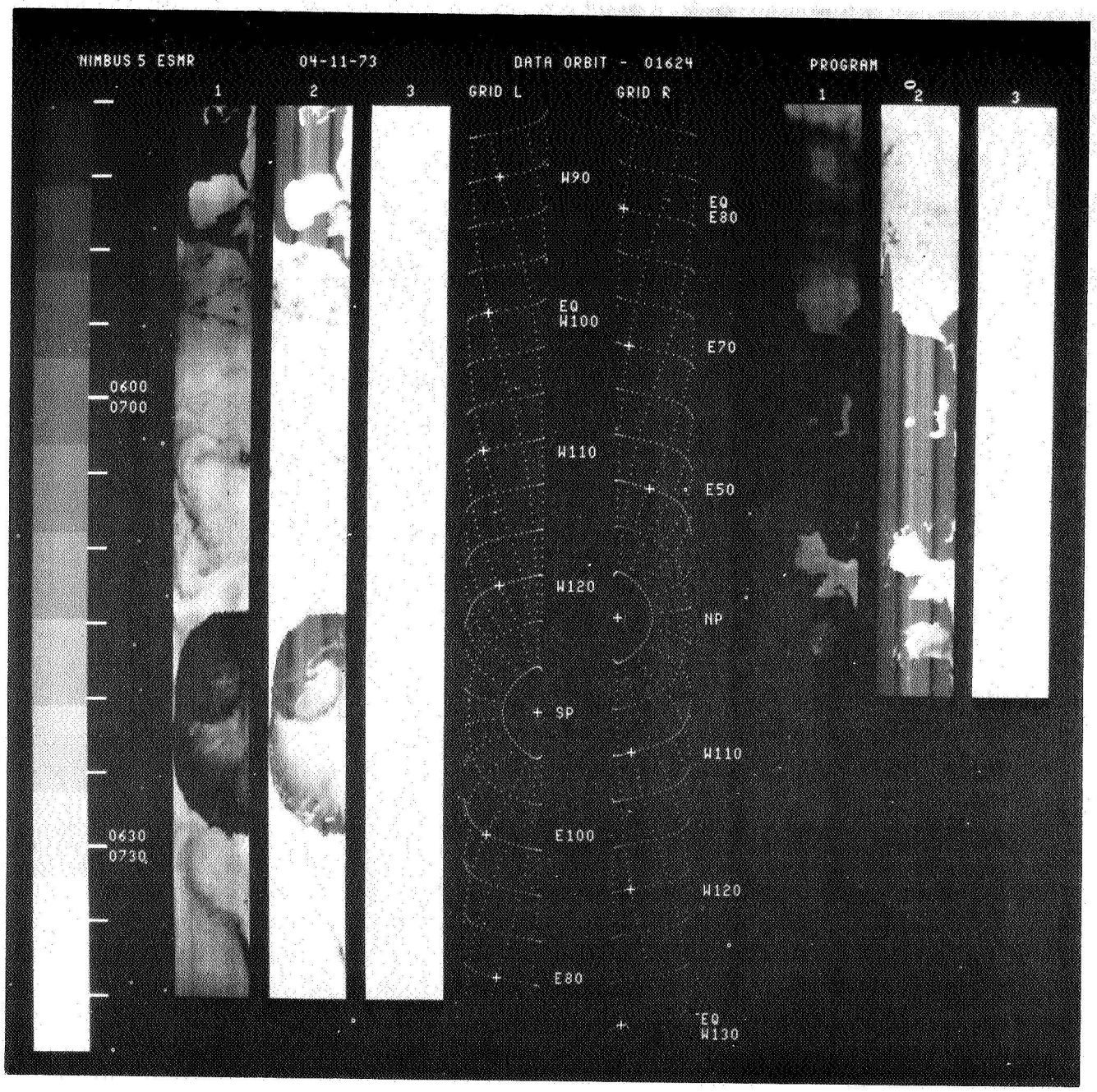

NIMBUS 5 ESMR
04-06-73
DATA ORBIT - 01557
PROGRAM
1
2
3
GRID L
GRID R
0600
0700
0630
0730
0
W100
EQ
E70
EQ
W100
E60
W110
E50
W130
NP
SP
W110
E90
W120
E80
EQ
W130

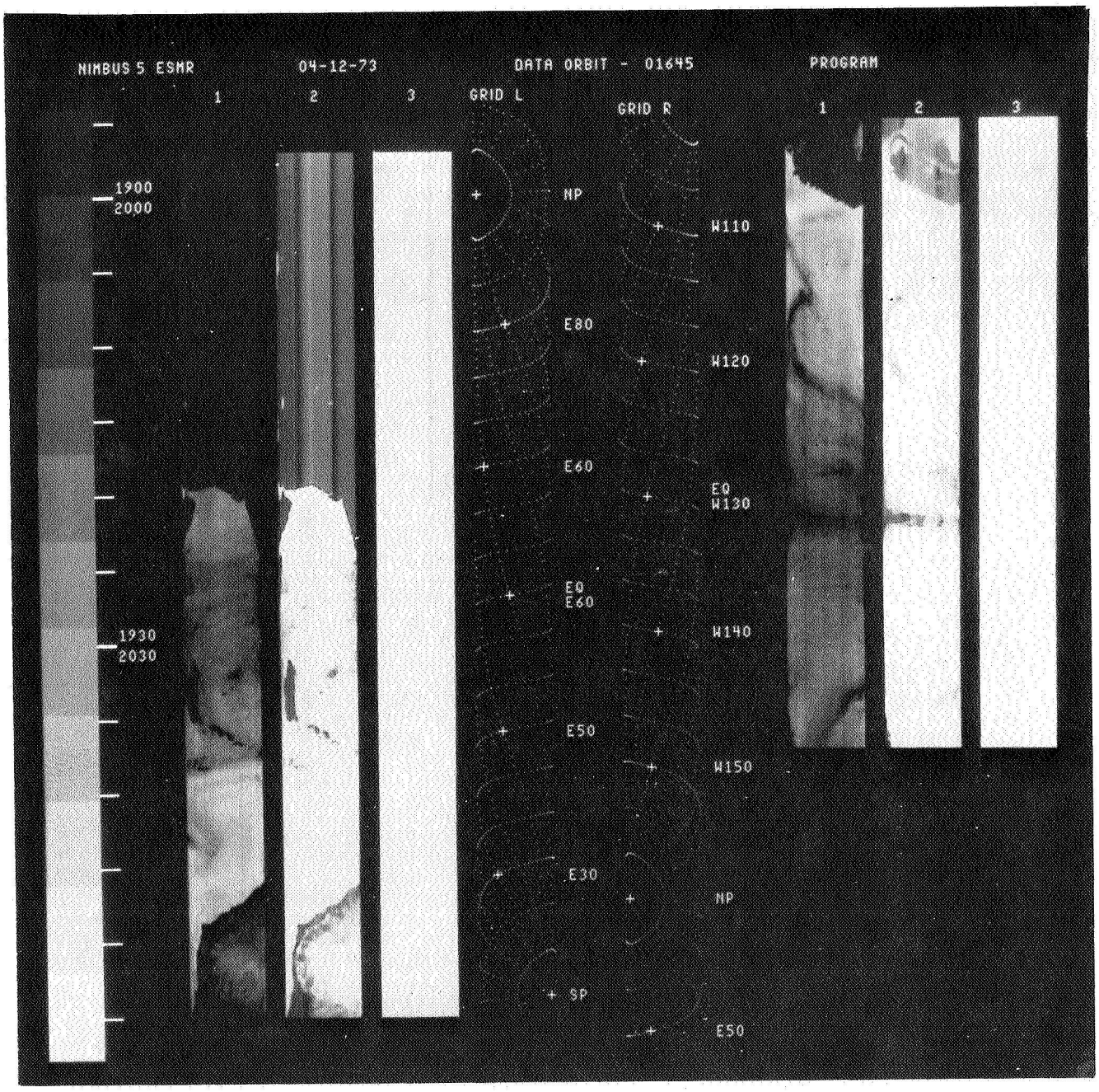

NIMBUS 5 ESMR
04-07-73
DATA ORBIT - 01572
PROGRAM
1
2
3
GRID L
W120
GRID R
1
2
3
W140
EQ
E30
EQ
W150
E20
W150
E10
W170
NP
SP
W150
E50
W170
E40
0900
1000
0930
1030

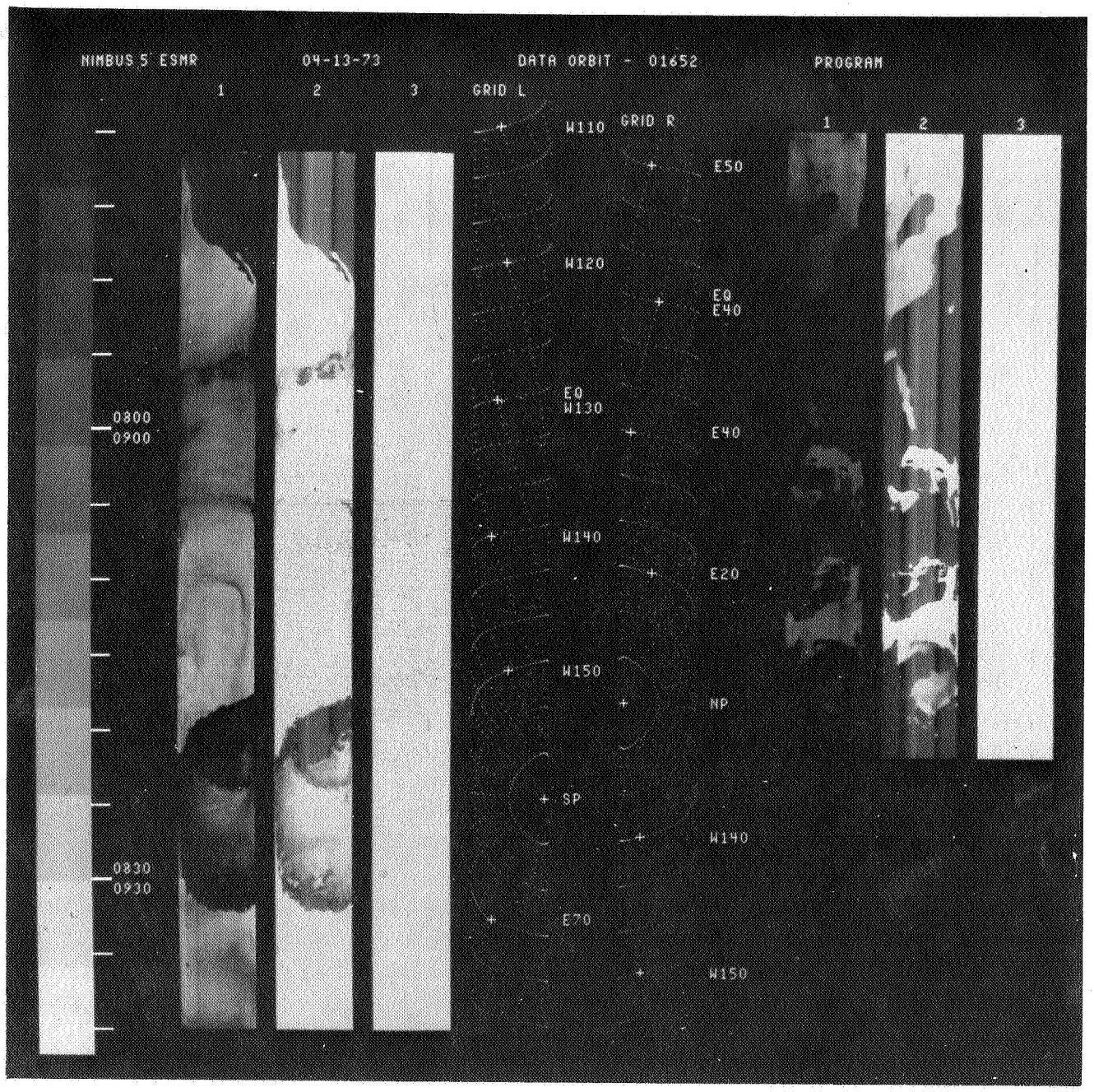

NIMBUS 5 ESMR
04-08-73
DATA ORBIT - 01589
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
1500
1600
1530
1630
E140
W60
E130
EQ
W70
EQ
E120
W70
E110
W90
E100
NP
SP
E110
W40

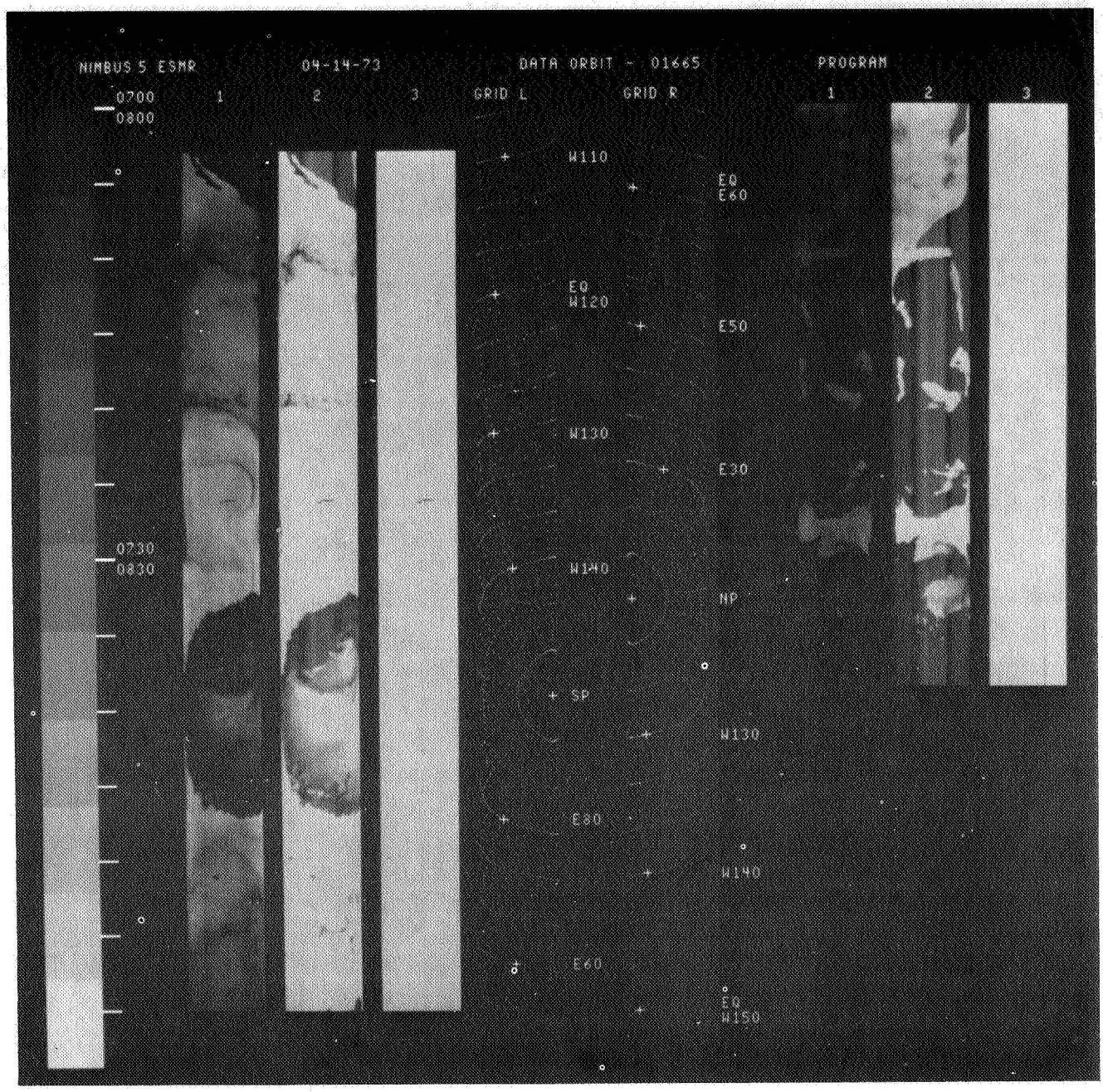

NIMBUS 5 ESMR
04-09-73
DATA ORBIT - 01596
PROGRAM
1
2
3
GRID L
GRID R
0330
0430
0400
0500
W50
E110
W60
EQ
E110
EQ
W70
E100
W80
E80
W90
NP
SP
W70
E130
W90

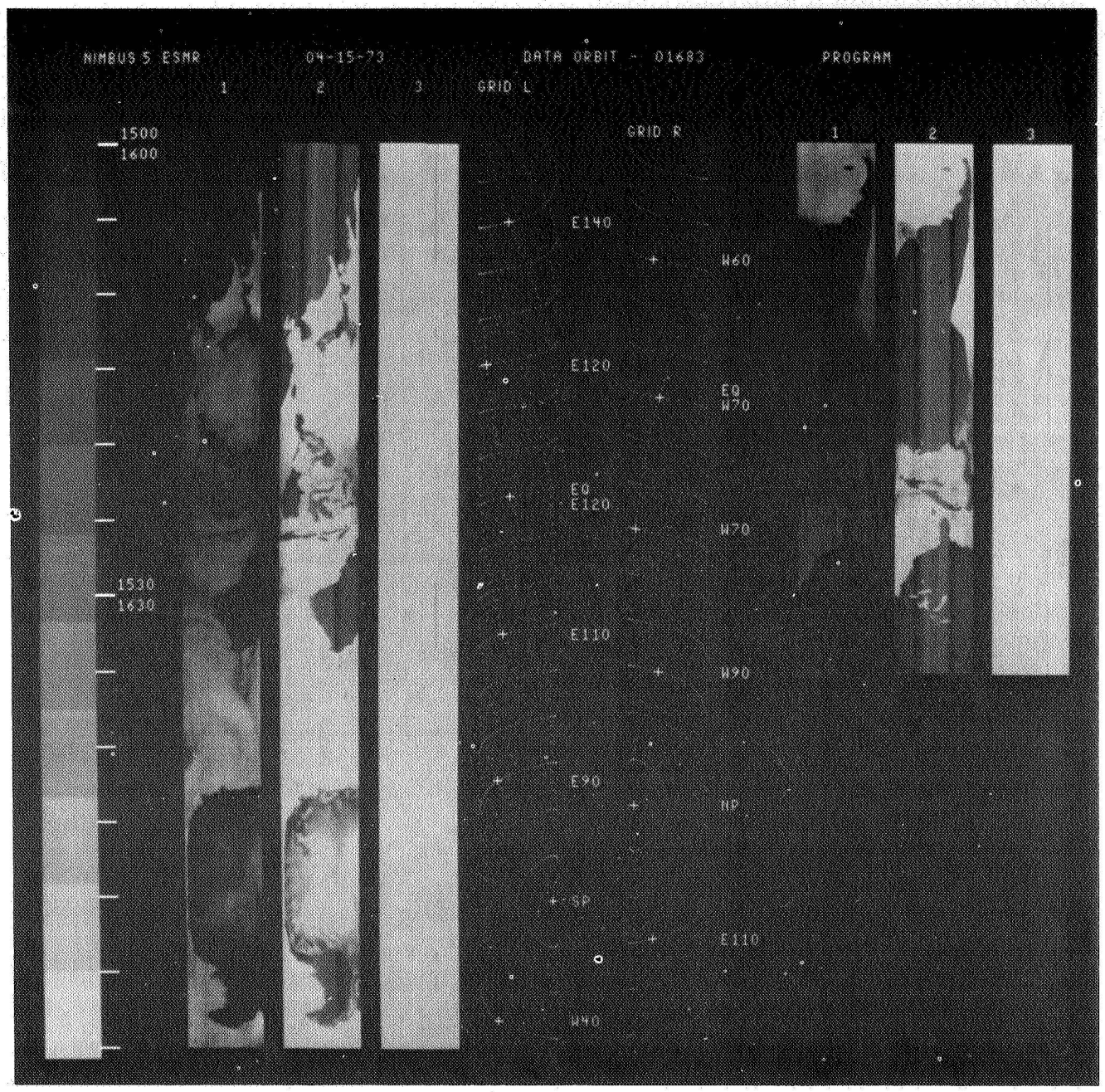

NIMBUS 5 ESMR
04-10-73
DATA ORBIT - 01615
PROGRAM
1
2
3
GRID L
GRID R
1330
1430
1400
1500
E160
W40
E150
EQ
W40
EQ
E140
W50
E130
W70
E120
NP
SP
E140
W20
E120

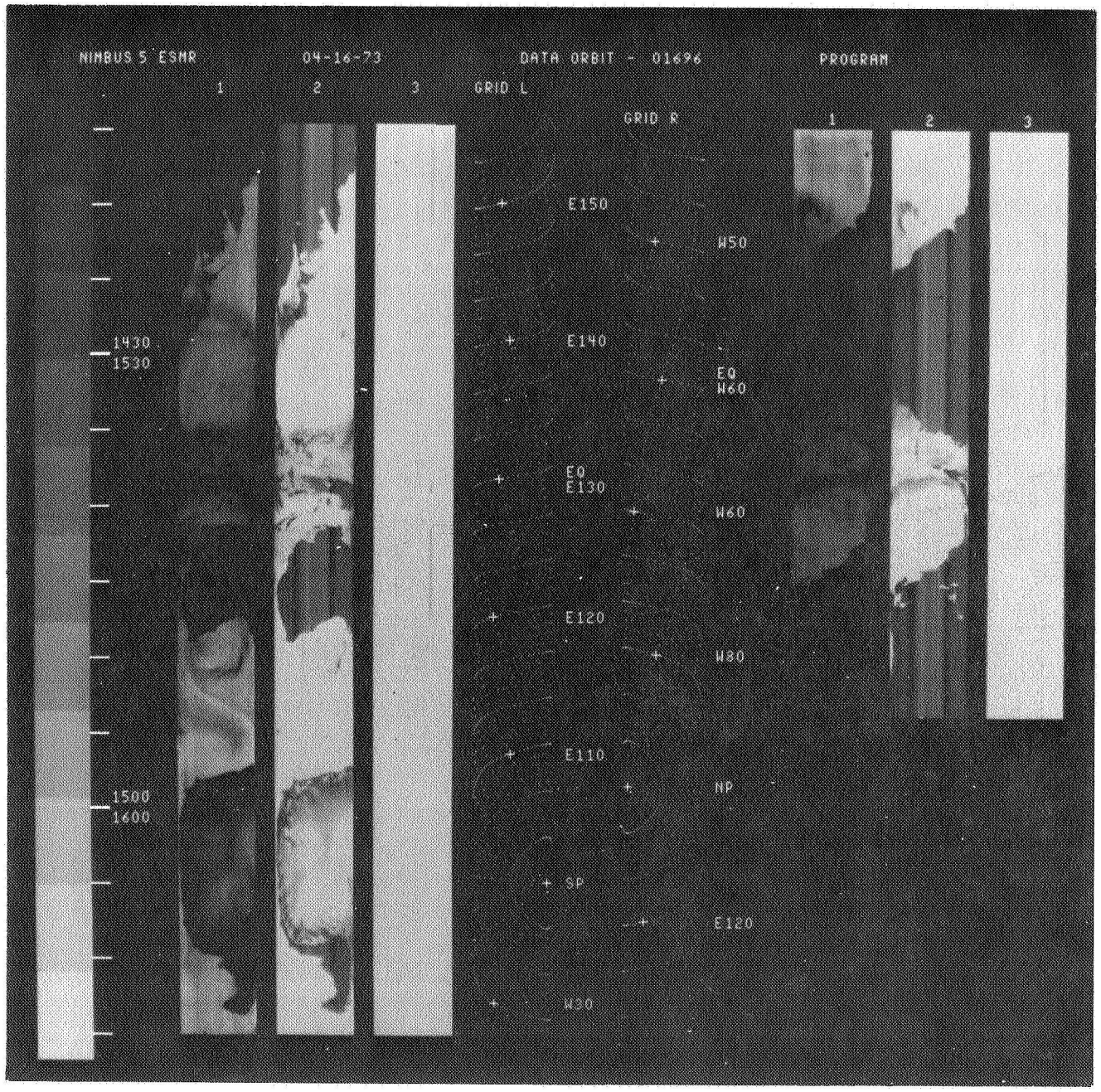

NIMBUS 5 ESMR
04-11-73
DATA ORBIT - 01624
PROGRAM
1
2
3
GRID L
GRID R
W90
EQ
E80
EQ
W100
E70
W110
E50
W120
NP
SP
W110
E100
W120
E80
EQ
W130
0600
0700
0630
0730

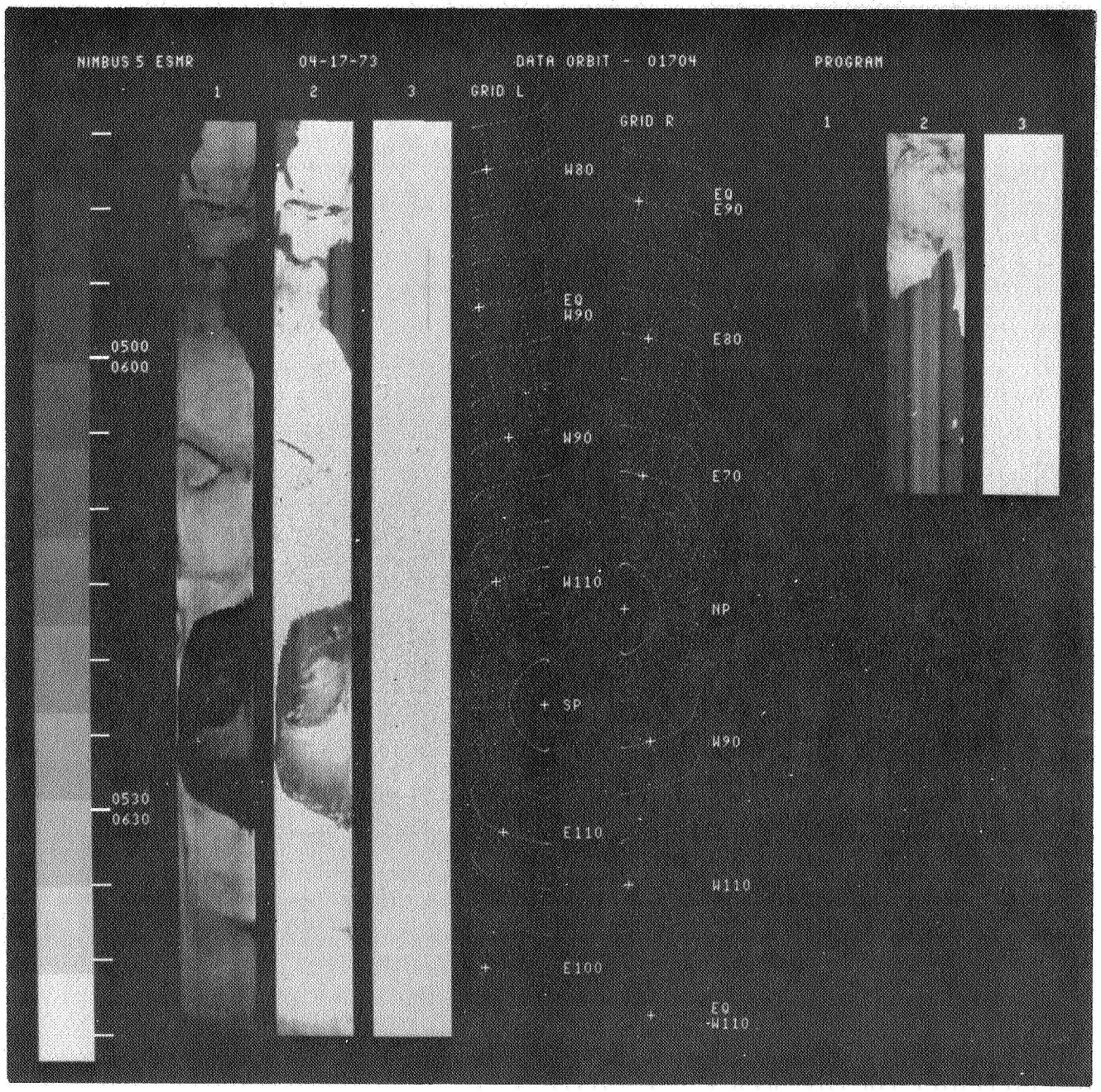

NIMBUS 5 ESMR
04-12-73
DATA ORBIT - 01645
PROGRAM
1
2
3
GRID L
GRID R
1900
2000
1930
2030
NP
E80
E60
EQ
E60
E50
E30
SP
W110
W120
EQ
W130
W140
W150
NP
E50

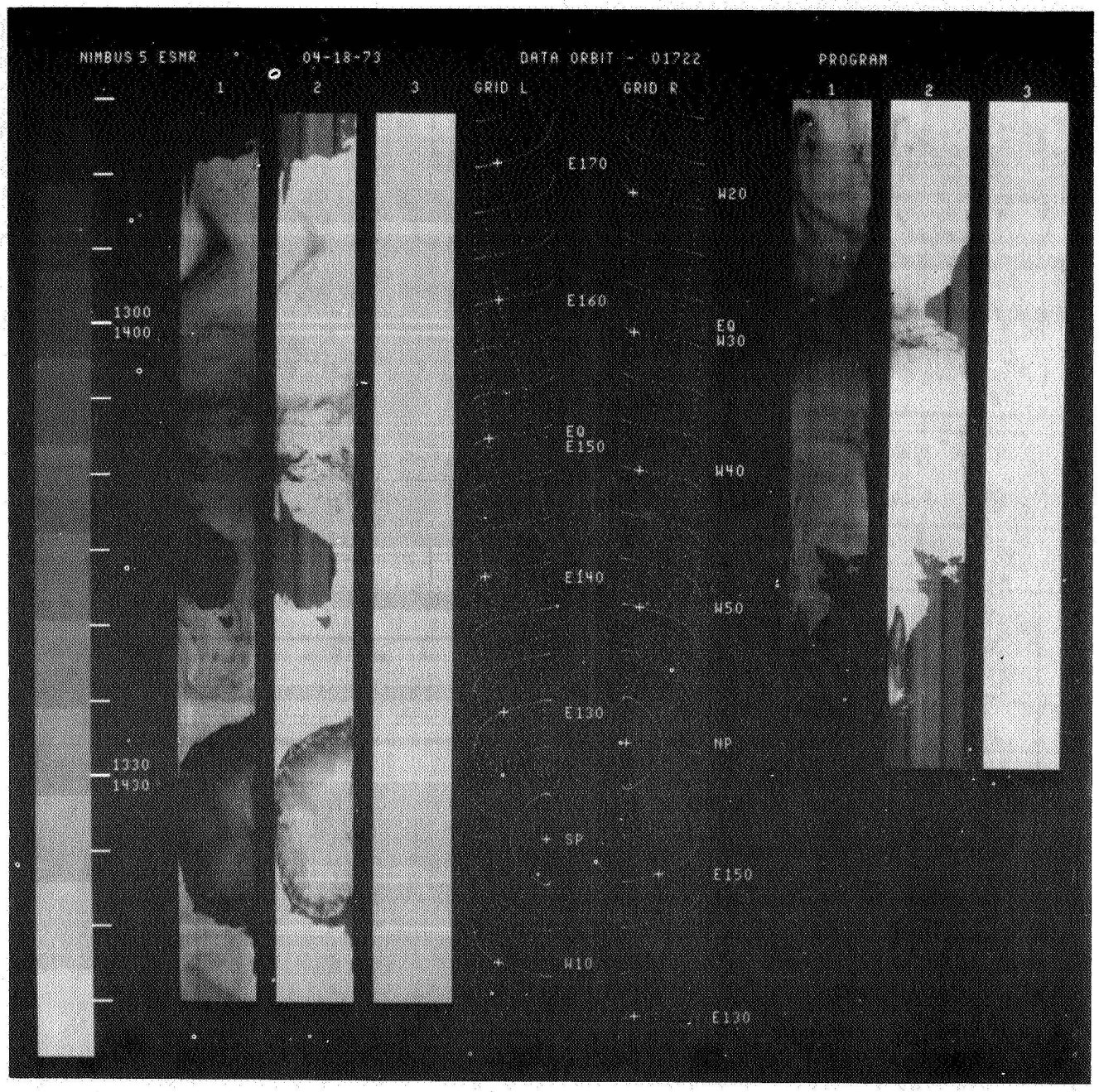

NIMBUS 5 ESMR
04-13-73
DATA ORBIT - 01652
PROGRAM
1
2
3
GRID L
GRID R
W110
E50
W120
EQ
E40
EQ
W130
E40
W140
E20
W150
NP
SP
W140
E70
W150
0800
0900
0830
0930

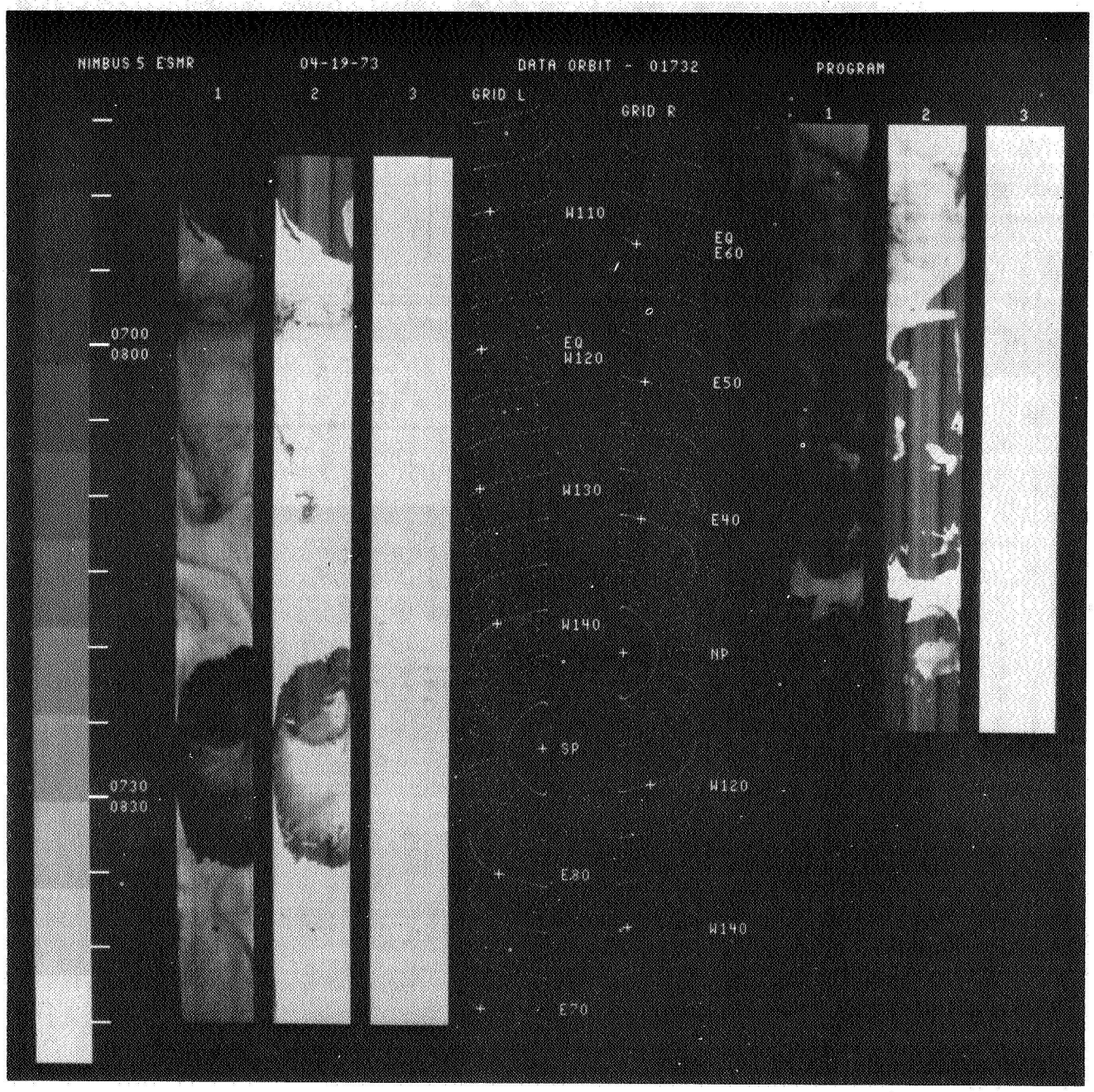

NIMBUS 5 ESMR
04-14-73
DATA ORBIT - 01665
PROGRAM
1
2
3
GRID L
GRID R
0700
0800
0730
0830
W110
EQ
E60
EQ
W120
E50
W130
E30
W140
NP
SP
W130
E80
W140
E60
EQ
W150

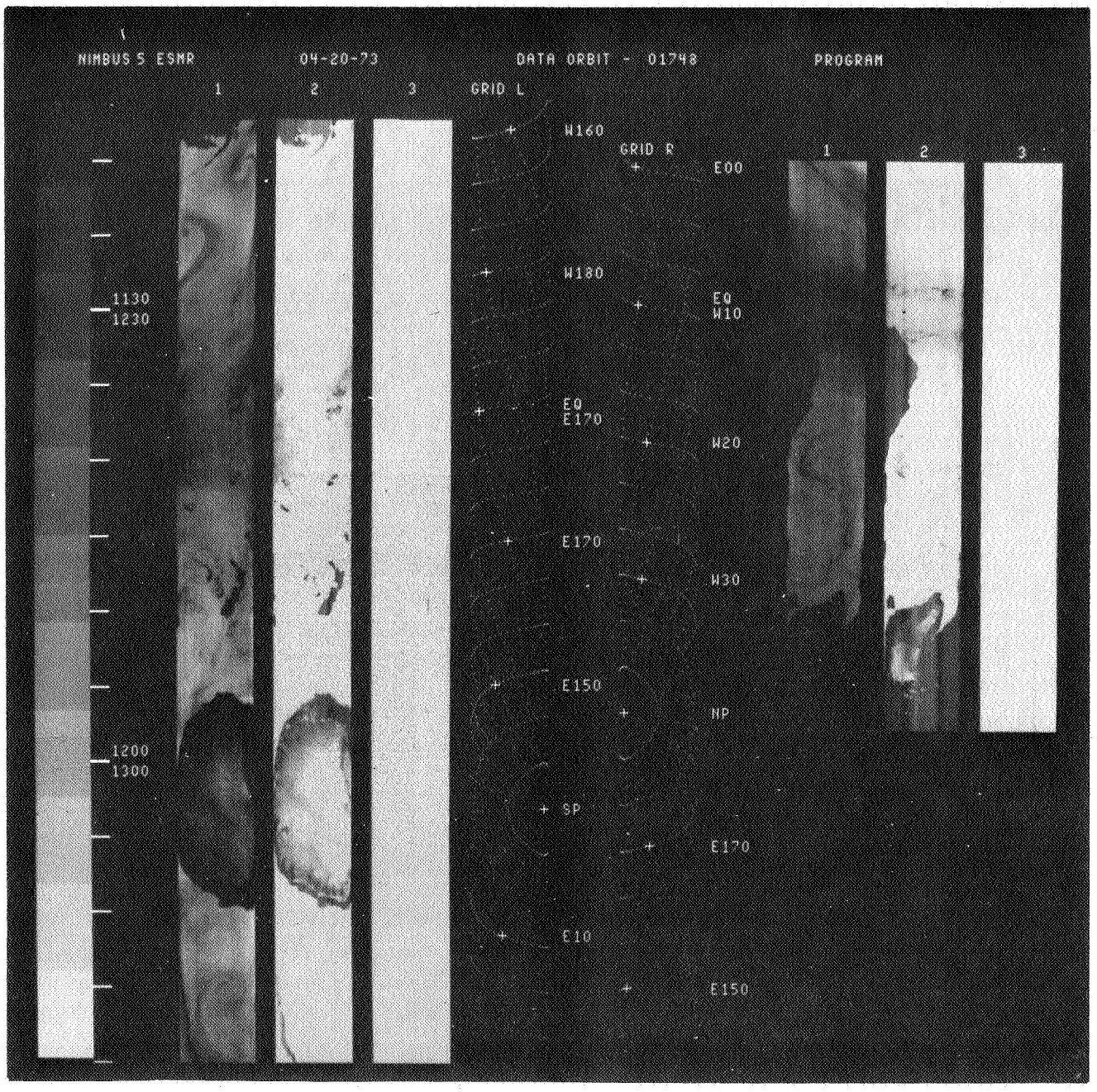

NIMBUS 5 ESMR
04-15-73
DATA ORBIT - 01683
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
1500
1600
1530
1630
E140
W60
E120
E0
W70
E0
E120
W70
E110
W90
E90
NP
SP
E110
W40

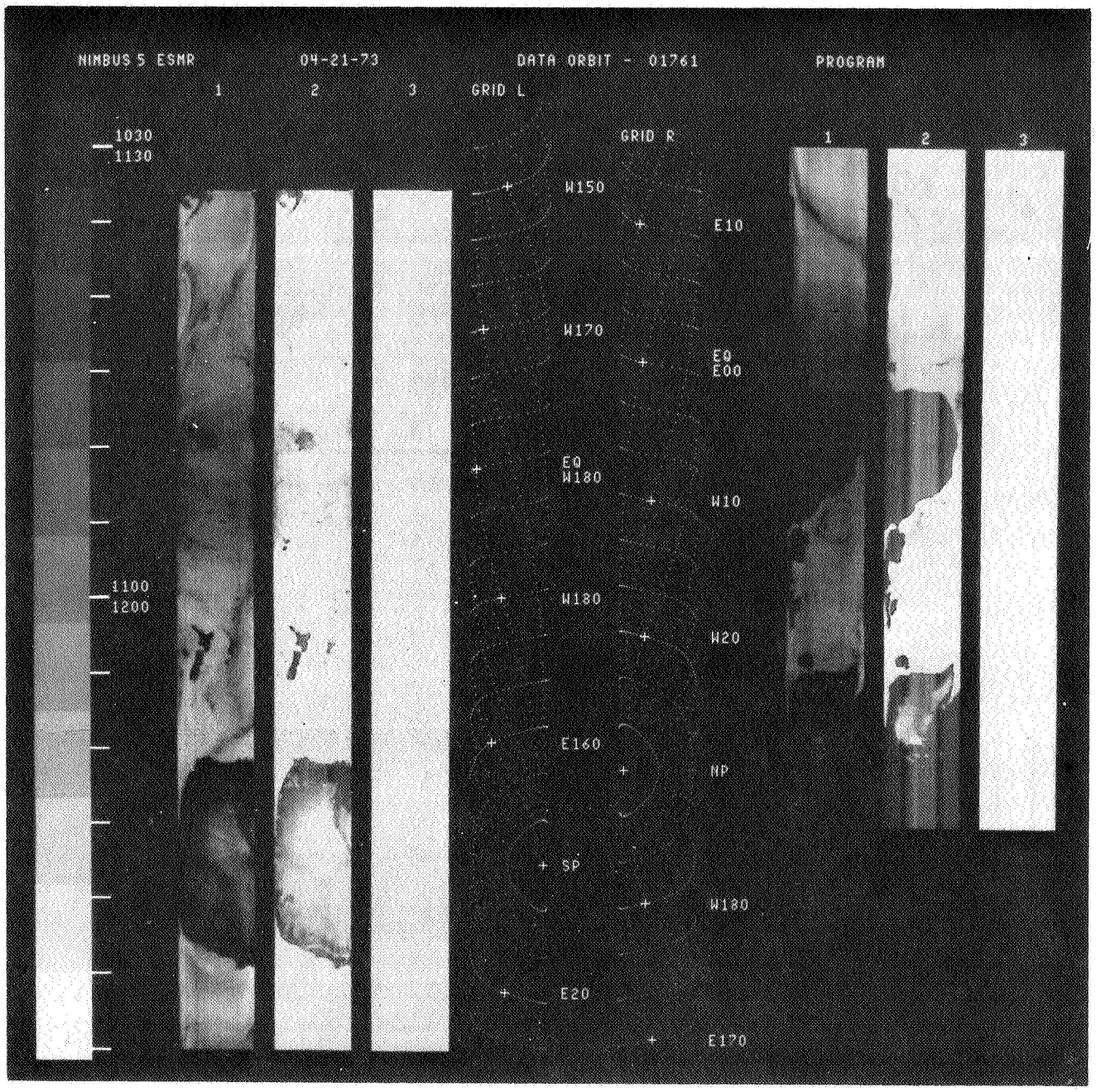

NIMBUS 5 ESMR
04-16-73
DATA ORBIT - 01696
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E150
W50
1430
1530
E140
EQ
W60
EQ
E130
W60
E120
W30
1500
1600
E110
NP
SP
E120
W30

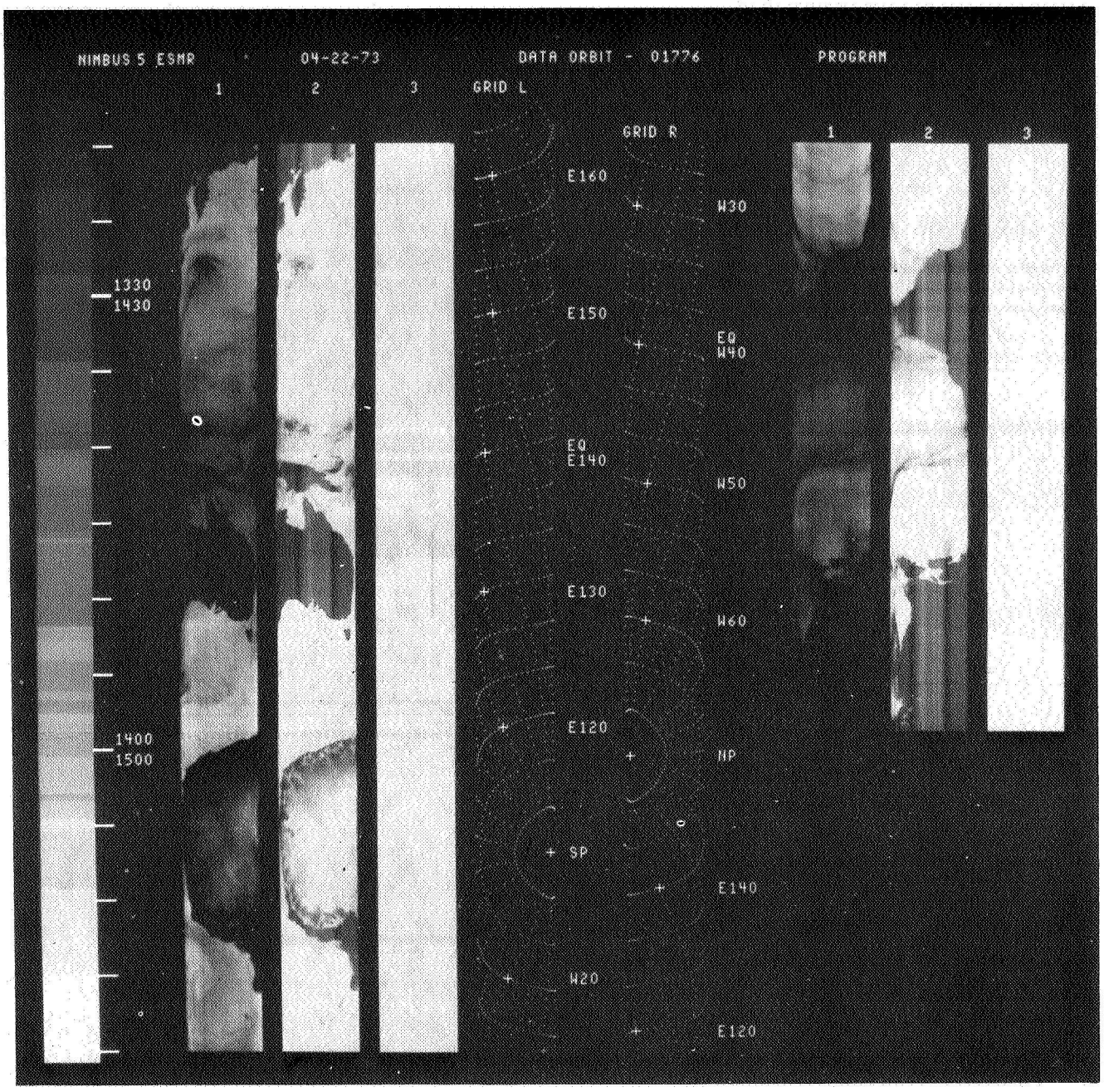

NIMBUS 5 ESMR
04-17-72
DATA ORBIT - 01704
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W80
EQ
E90
EQ
W90
E80
W90
E70
W110
NP
SP
W90
E110
W110
E100
EQ
W110
0500
0600
0530
0630

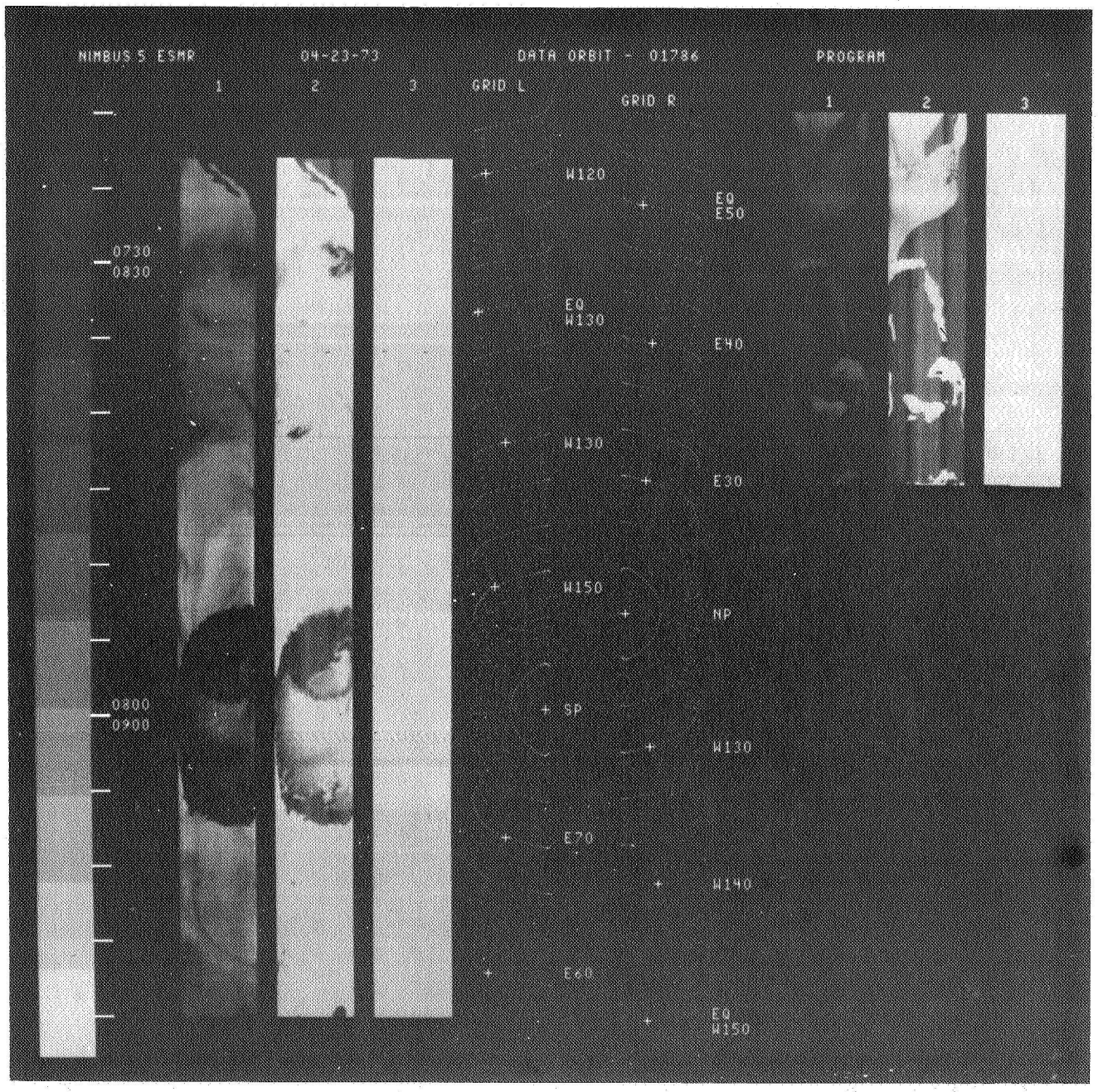

NIMBUS 5 ESMR
04-18-73
DATA ORBIT - 01722
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E170
W20
E160
E0
W30
E0
E150
W40
E140
W50
E130
NP
SP
E150
W10
E130
1300
1400
1330
1430

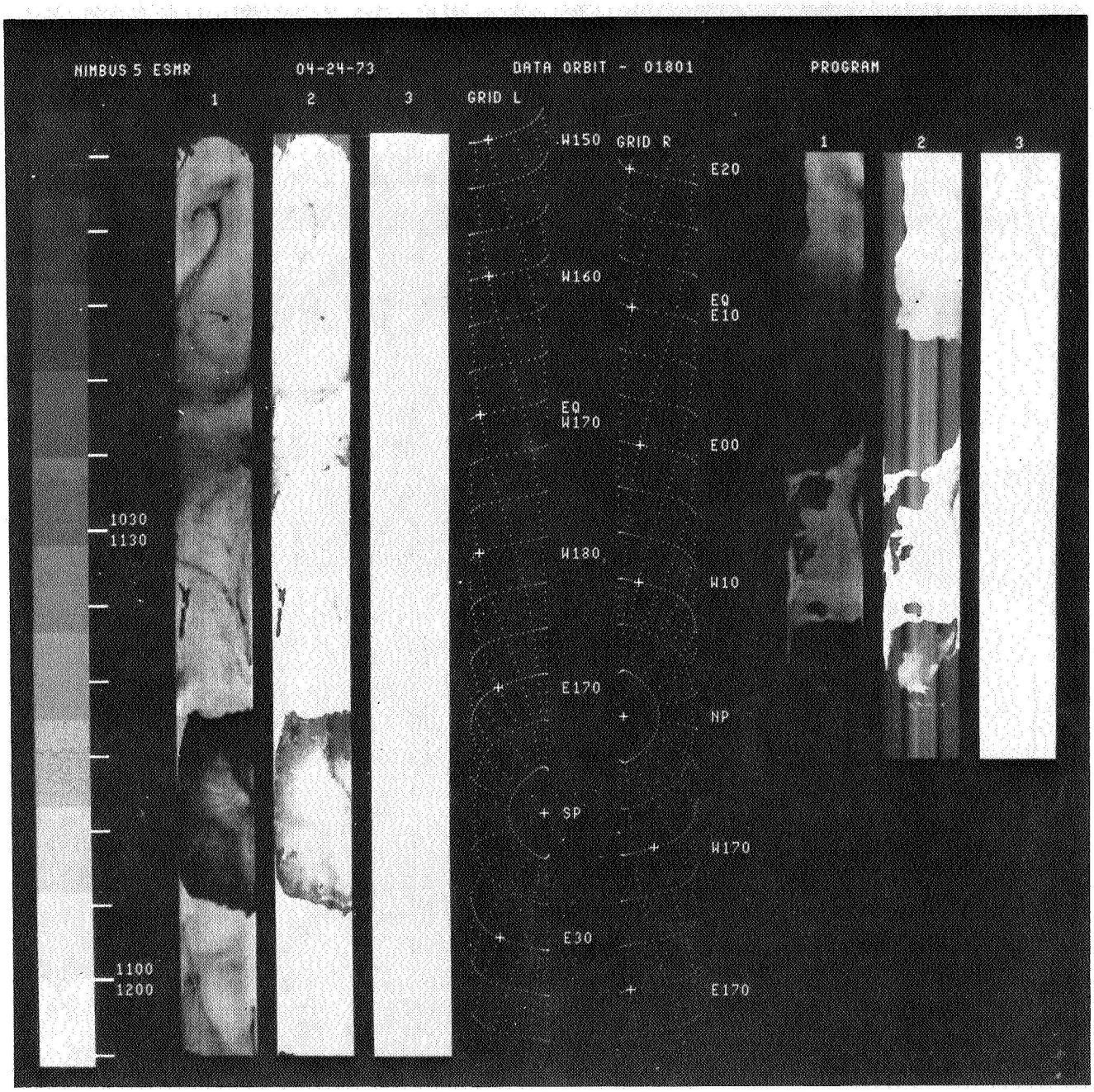

NIMBUS 5 ESMR
04-19-73
DATA ORBIT - 01732
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W110
EQ
E60
0700
0800
EQ
W120
E50
W130
E40
W140
NP
SP
0730
0830
W120
E30
W140
E70

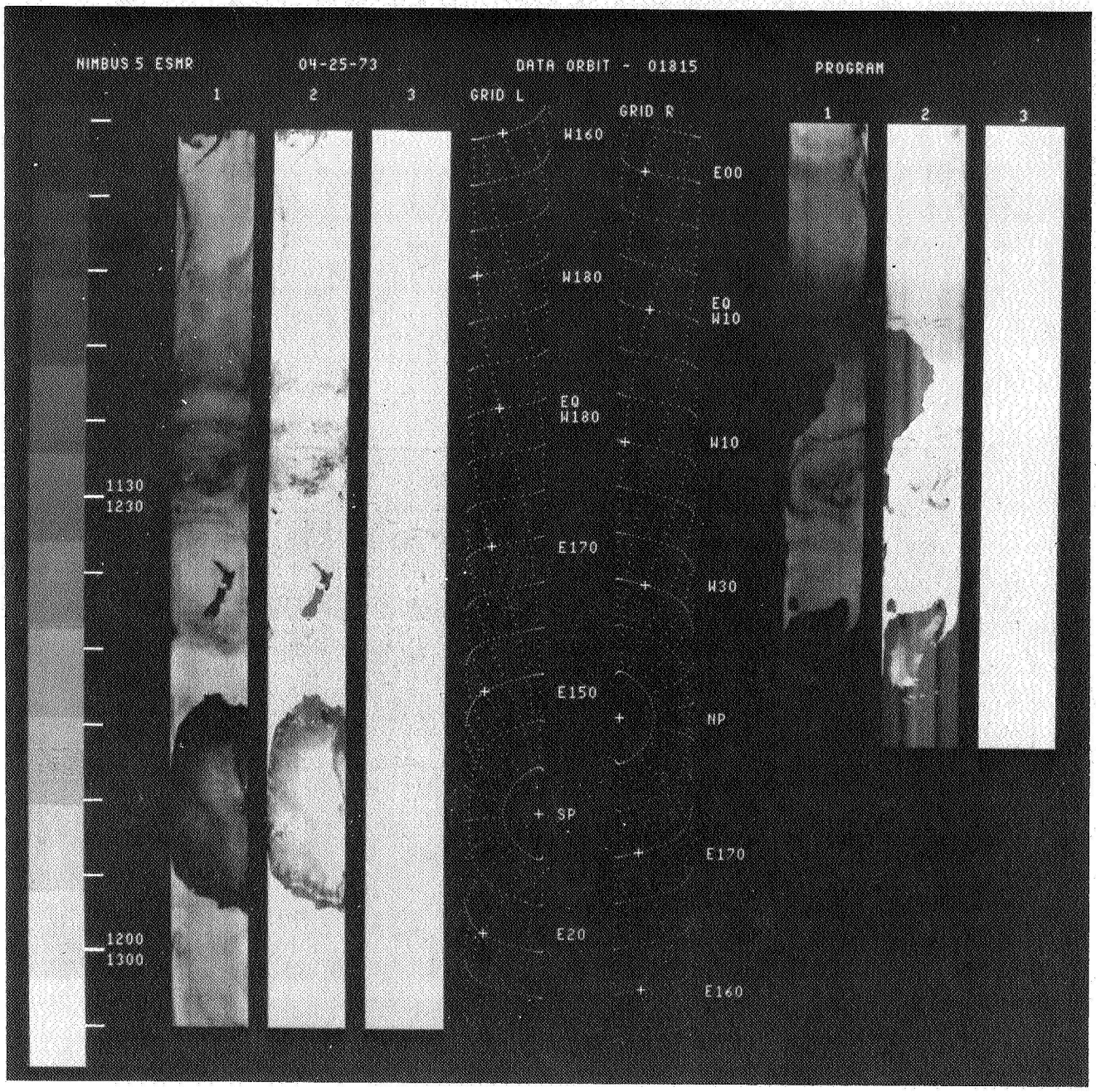

NIMBUS 5 ESMR
04-20-73
DATA ORBIT - 01748
PROGRAM
1
2
3
GRID L
GRID R
W160
E00
W180
EQ
W10
EQ
E170
W20
E170
W30
E150
NP
SP
E170
E10
E150
1130
1230
1200
1300

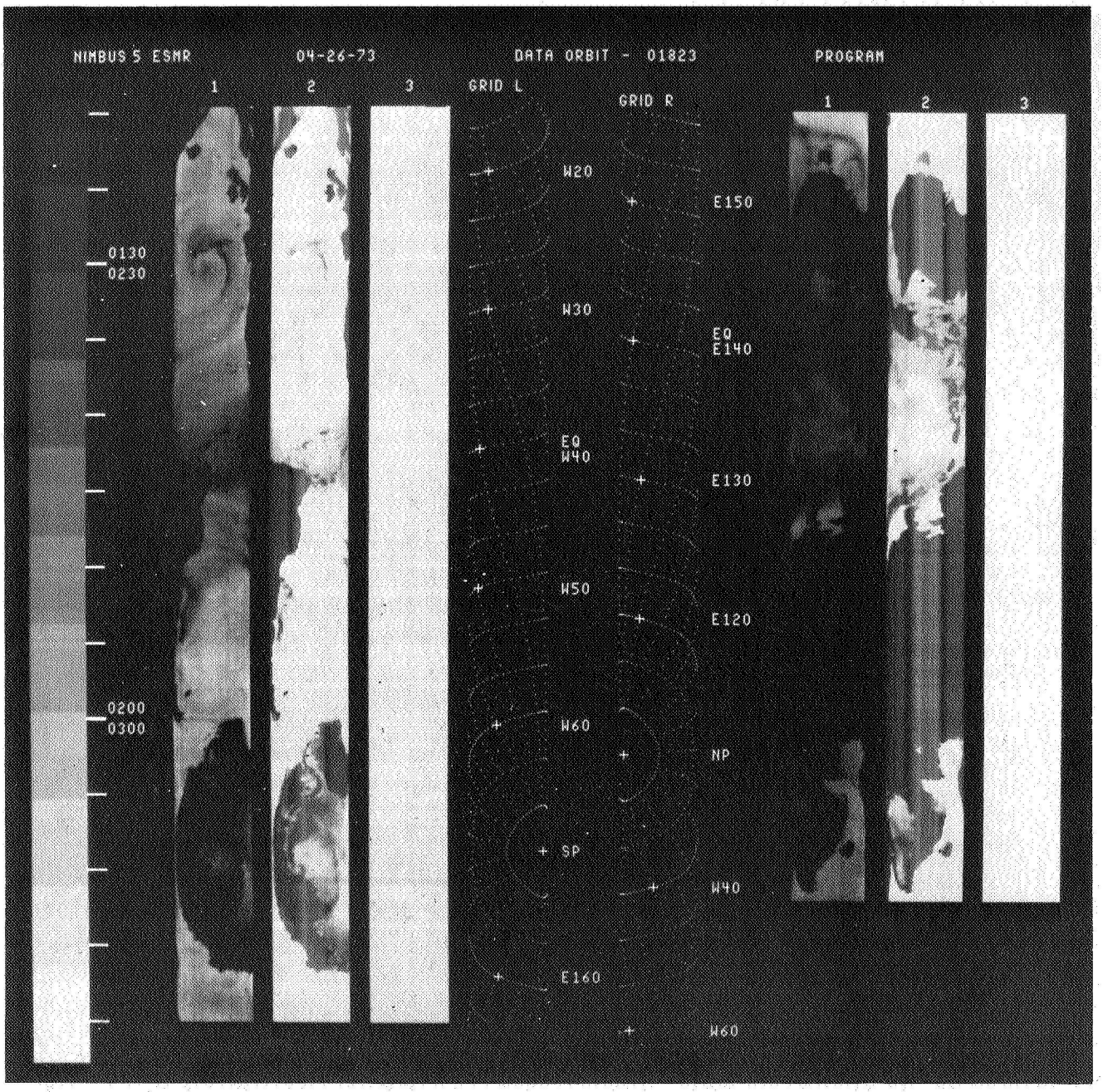

NIMBUS 5 ESMR
04-21-73
DATA ORBIT - 01761
PROGRAM
1
2
3
GRID L
GRID R
1030
1130
1100
1200
W150
E10
W170
E0
E00
E0
W180
W10
W180
W20
E160
NP
SP
W180
E20
E170

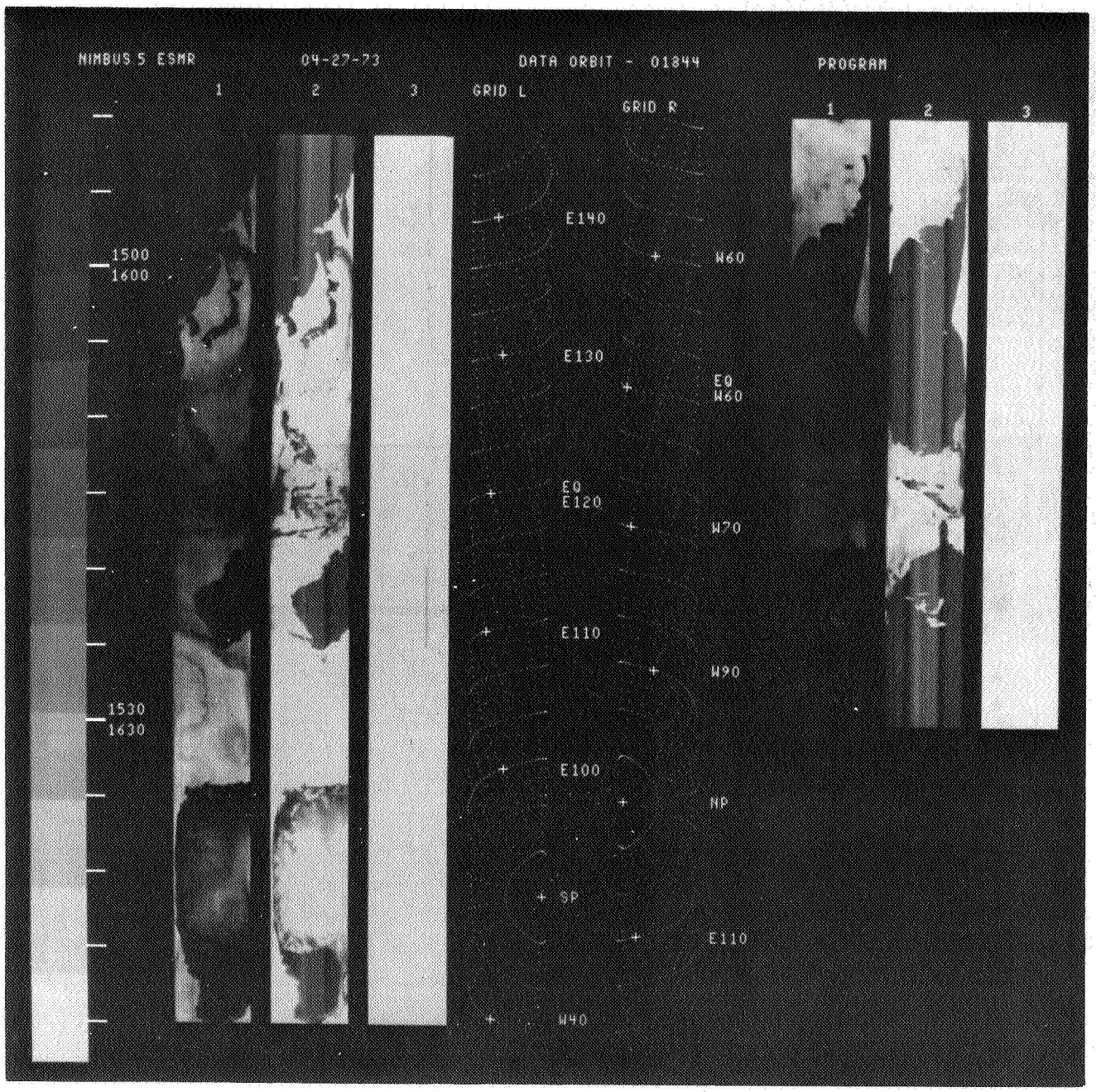

NIMBUS 5 ESMR
04-22-73
DATA ORBIT - 01776
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
1330
1430
1400
1500
E160
W30
E150
EQ
W40
EQ
E140
W50
E130
W60
E120
NP
SP
E140
W20
E120

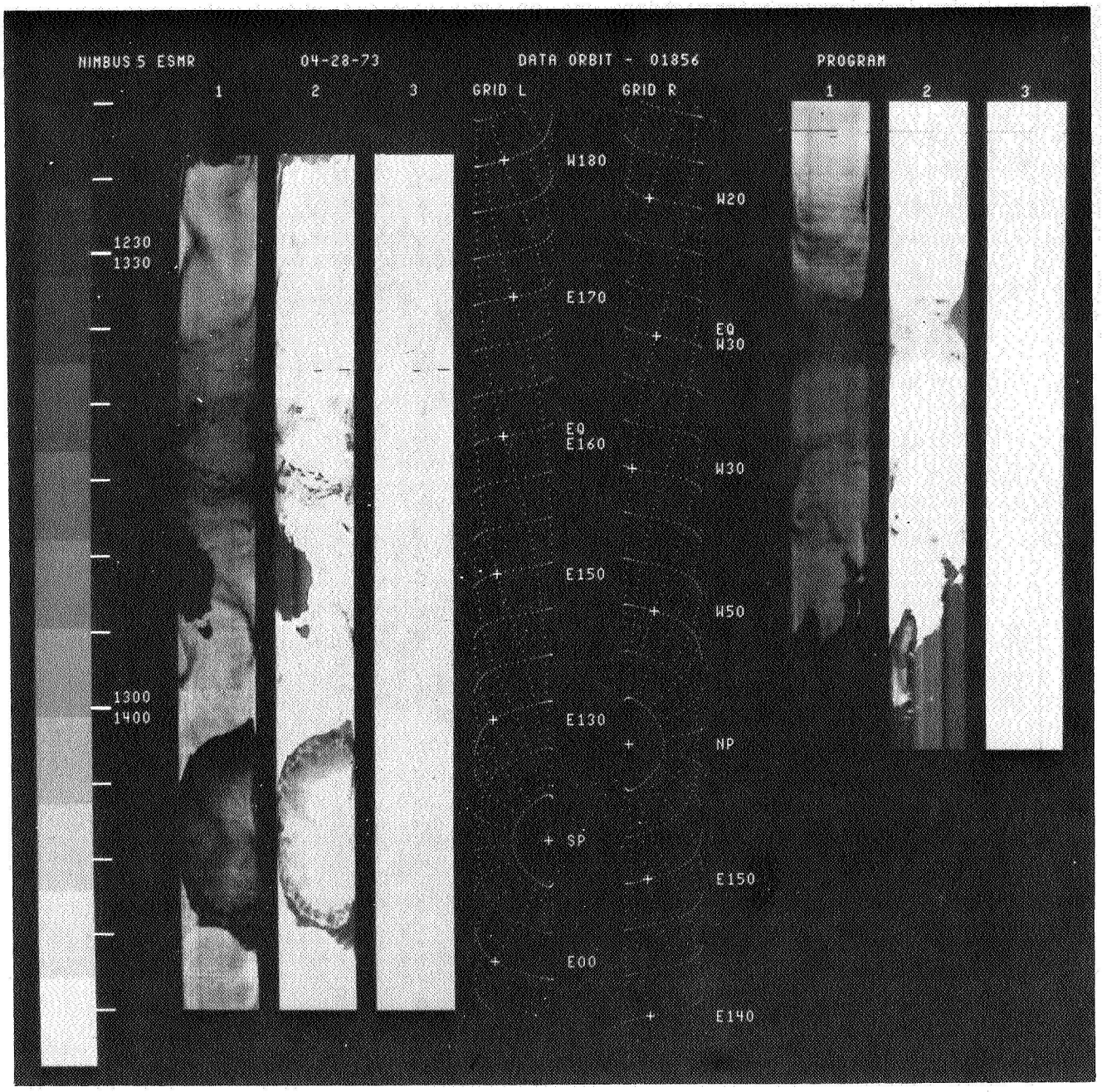

NIMBUS 5 ESMR
04-23-73
DATA ORBIT - 01784
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W120
EQ
E50
0730
0830
EQ
W130
E40
W130
E30
W150
NP
0800
0900
SP
W130
E70
W140
E60
EQ
W150

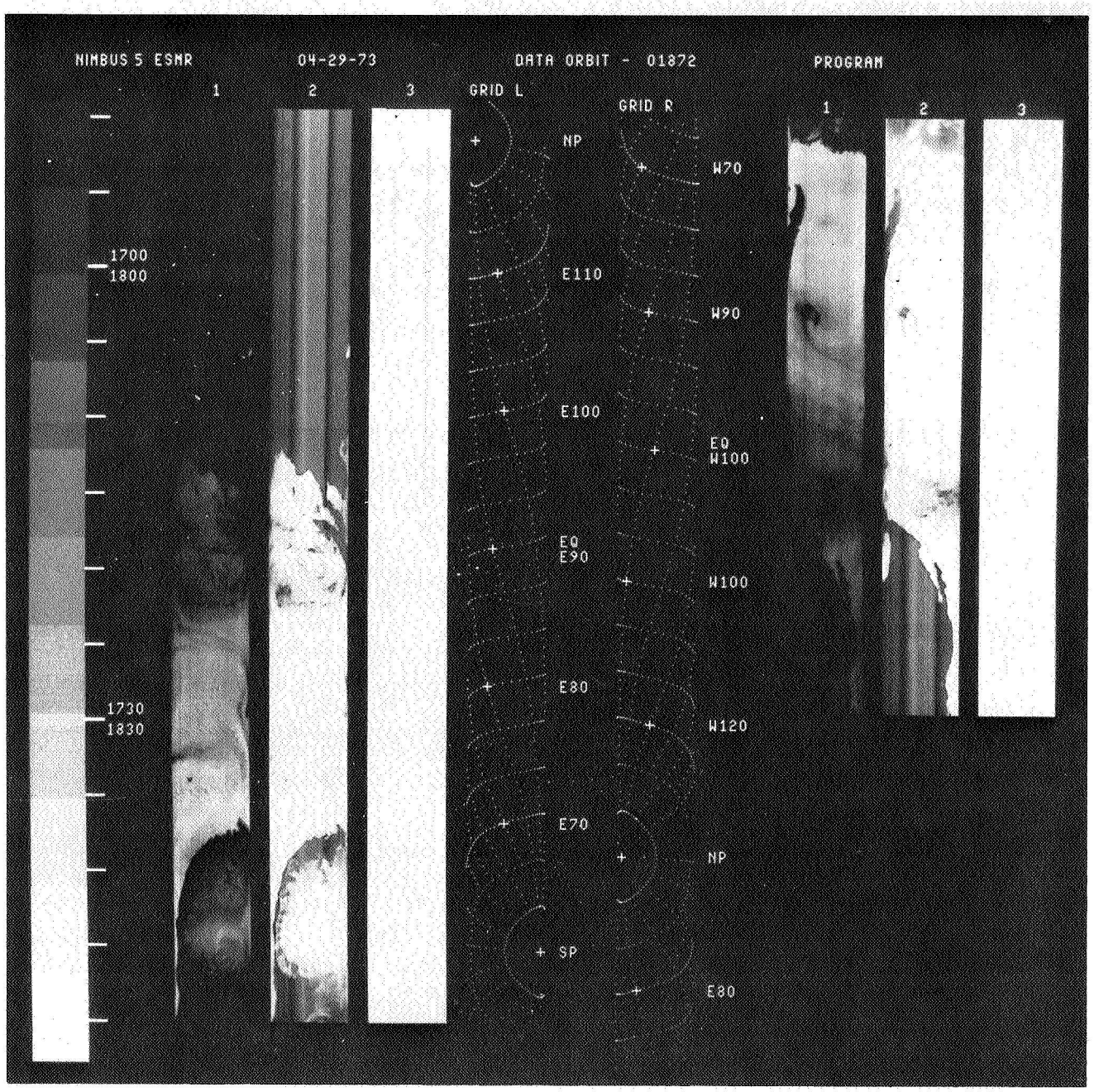

NIMBUS 5 ESMR
04-24-73
DATA ORBIT - 01801
PROGRAM
1
2
3
GRID L
GRID R
1030
1130
1100
1200
W150
E20
W160
EQ
E10
EQ
W170
E00
W180
W10
E170
NP
SP
W170
E30
E170

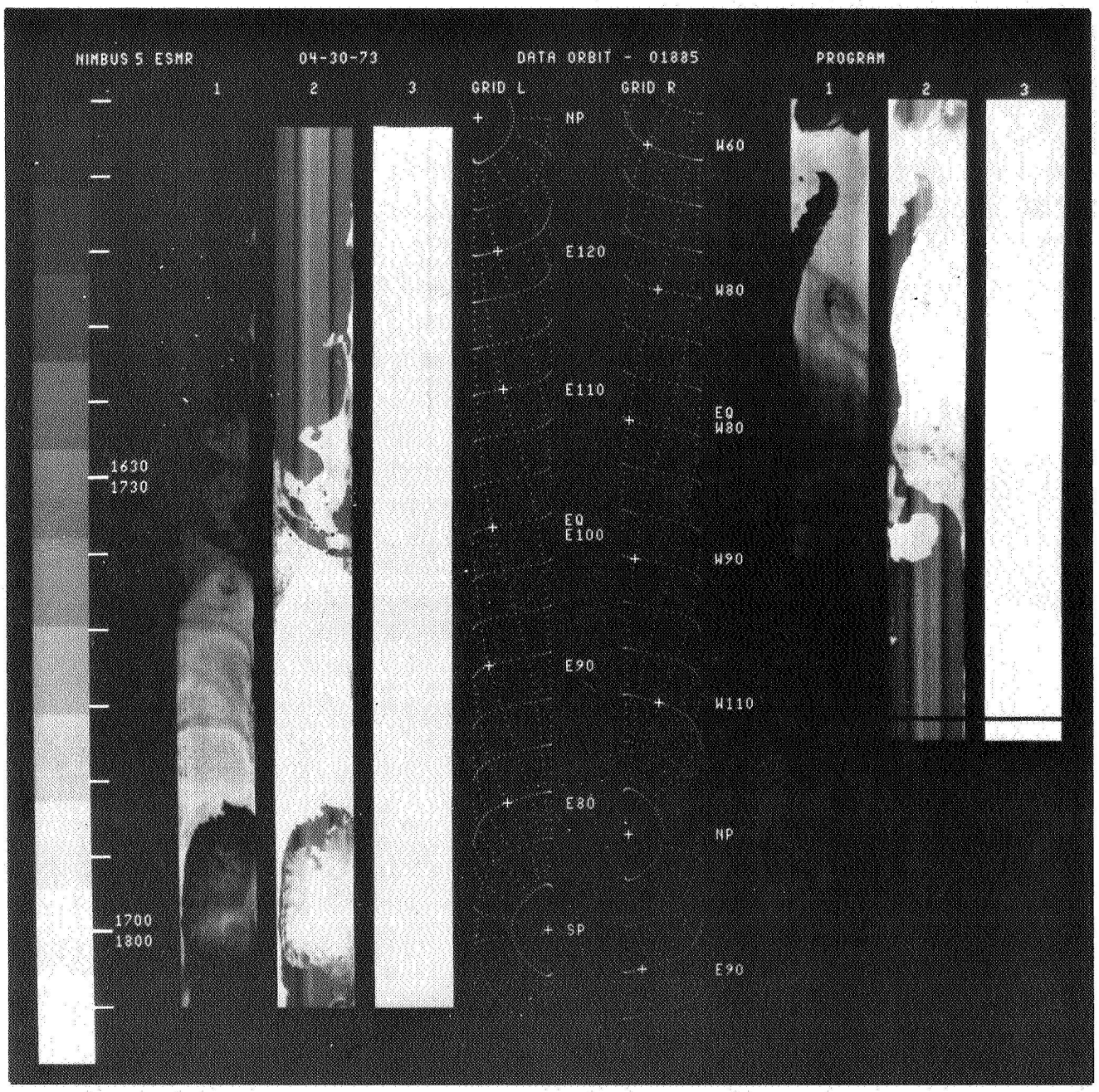

NIMBUS 5 ESMR
04-25-73
DATA ORBIT - 01815
PROGRAM
1
2
3
GRID L
GRID R
W160
E00
W180
EQ
W10
EQ
W180
W10
E170
W30
E150
NP
SP
E170
E20
E160
1130
1230
1200
1300

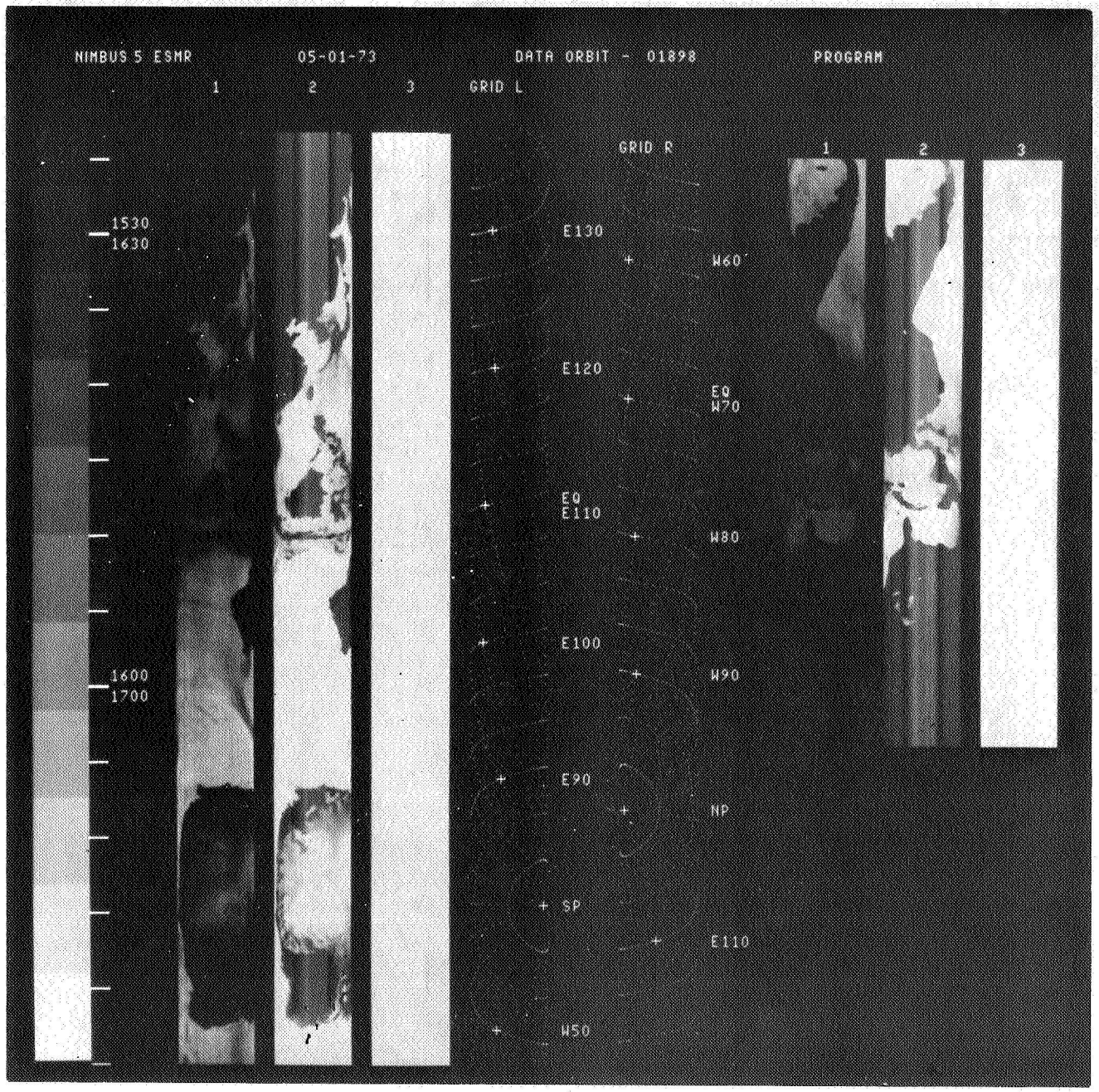

NIMBUS 5 ESMR
04-26-73
DATA ORBIT - 01823
PROGRAM
1
2
3
GRID L
GRID R
0130
0230
0200
0300
W20
E150
W30
EQ
E140
EQ
W40
E130
W50
E120
W60
NP
SP
W40
E160
W60

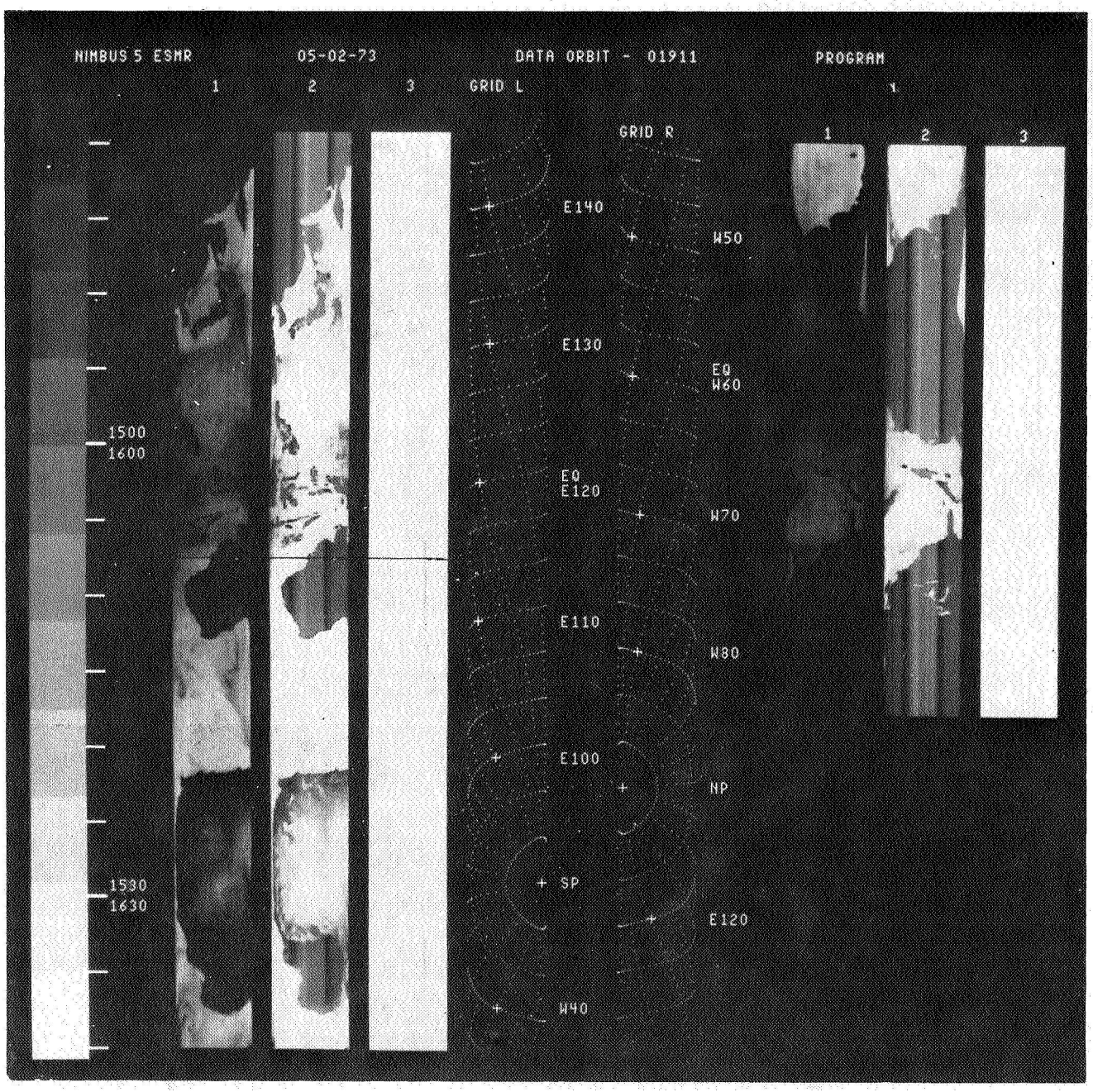

NIMBUS 5 ESMR
04-27-73
DATA ORBIT - 01844
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E140
W60
E130
E0
W60
E0
E120
W70
E110
W90
E100
NP
SP
E110
W40
1500
1600
1530
1630

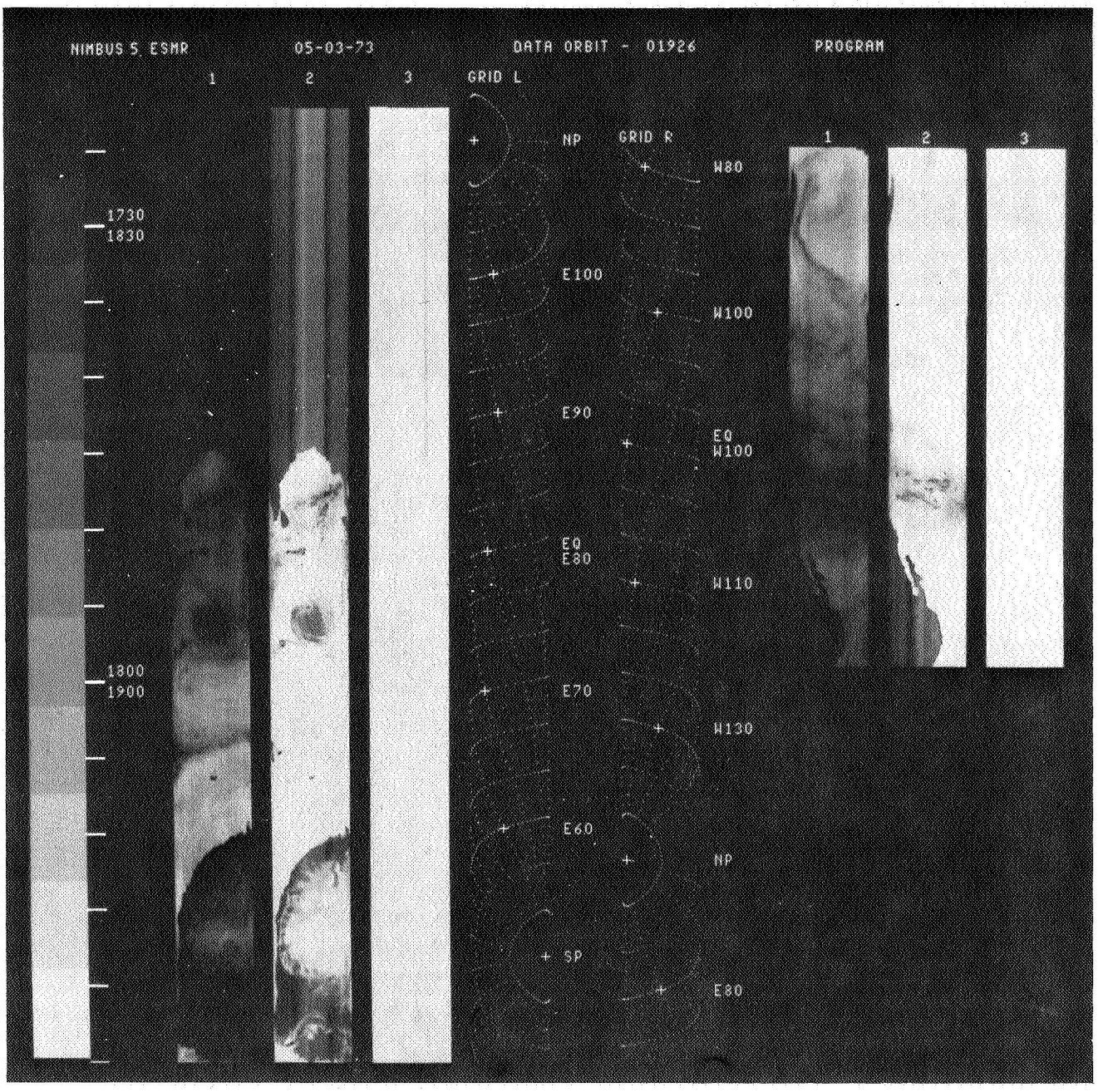

NIMBUS 5 ESMR
04-28-73
DATA ORBIT - 01856
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
1230
1330
1300
1400
W180
W20
E170
EQ
W30
EQ
E160
W30
E150
W50
E130
NP
SP
E150
E00
E140

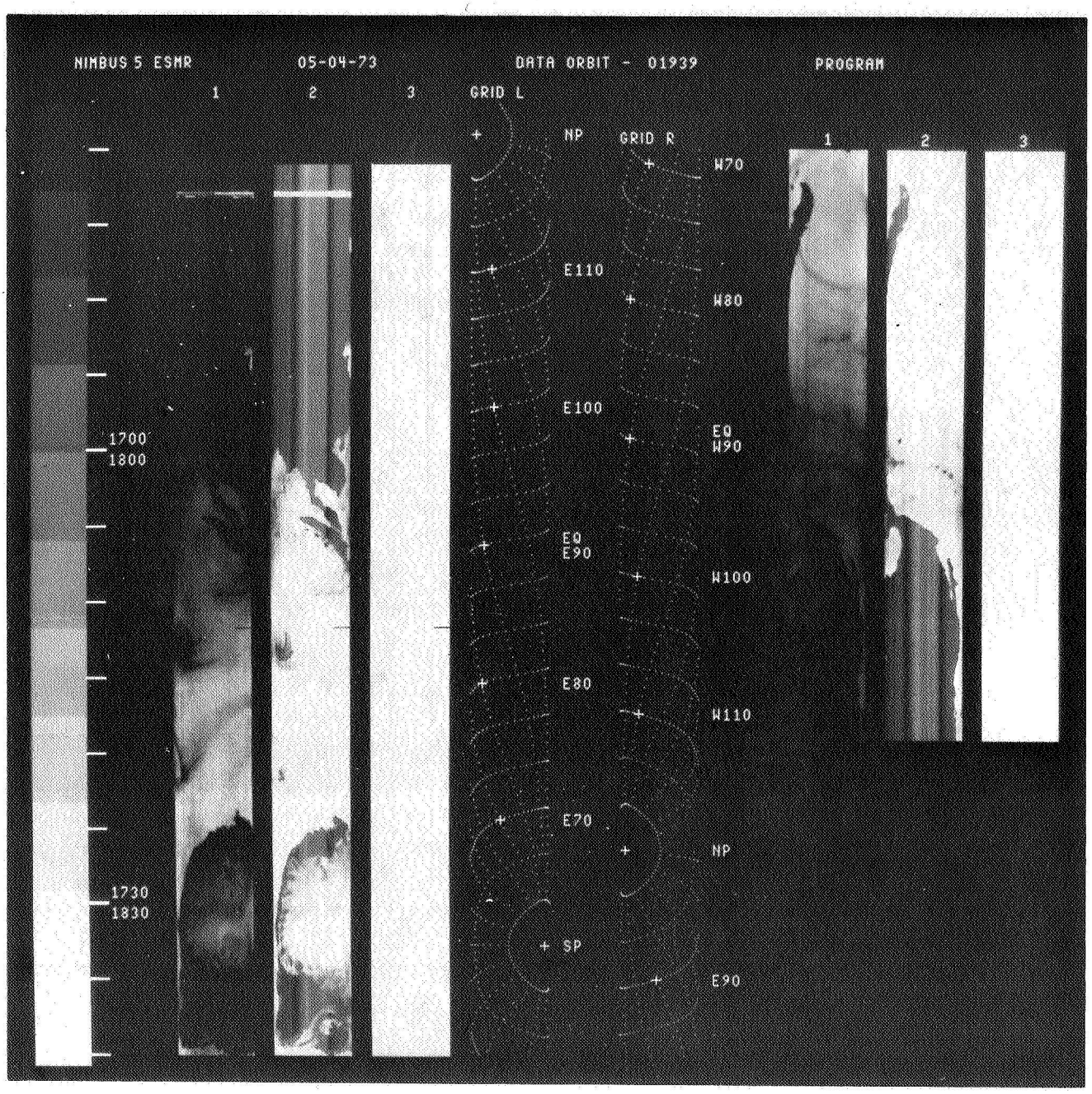

NIMBUS 5 ESMR
04-29-73
DATA ORBIT - 01872
PROGRAM
1
2
3
GRID L
GRID R
1700
1800
1730
1830
NP
E110
E100
EQ
E90
E80
E70
SP
W70
W90
EQ
W100
W100
W120
NP
E80

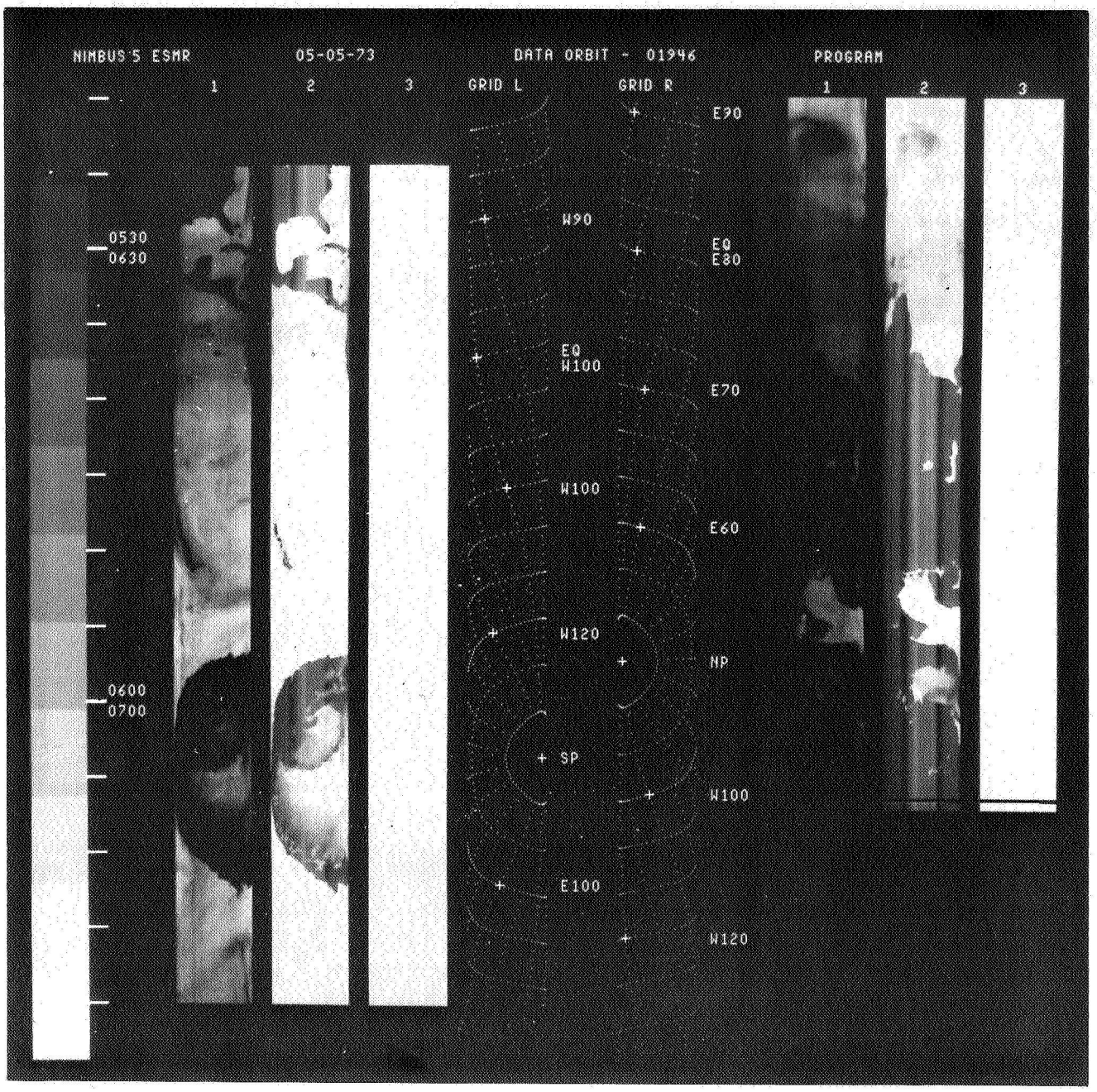

NIMBUS 5 ESMR
04-30-73
DATA ORBIT - 01885
PROGRAM
1
2
3
GRID L
GRID R
NP
W60
E120
W80
E110
EQ
W80
EQ
E100
W90
E90
W110
E80
NP
SP
E90
1630
1730
1700
1800

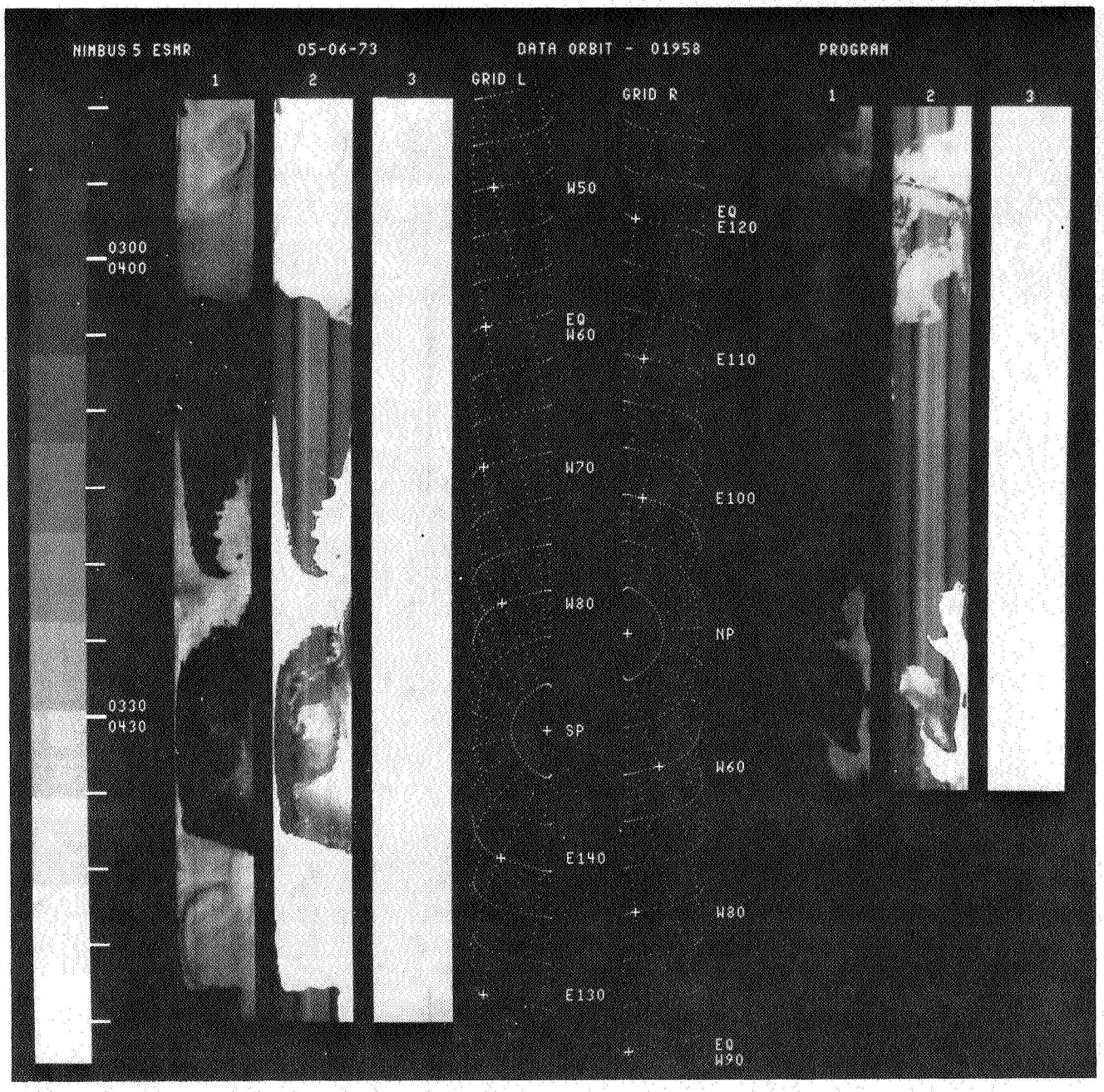

NIMBUS 5 ESMR
05-01-73
DATA ORBIT - 01898
PROGRAM
1
2
3
GRID L
GRID R
1530
1630
1600
1700
E130
W60
E120
EQ
W70
EQ
E110
W80
E100
W90
E90
NP
SP
E110
W50

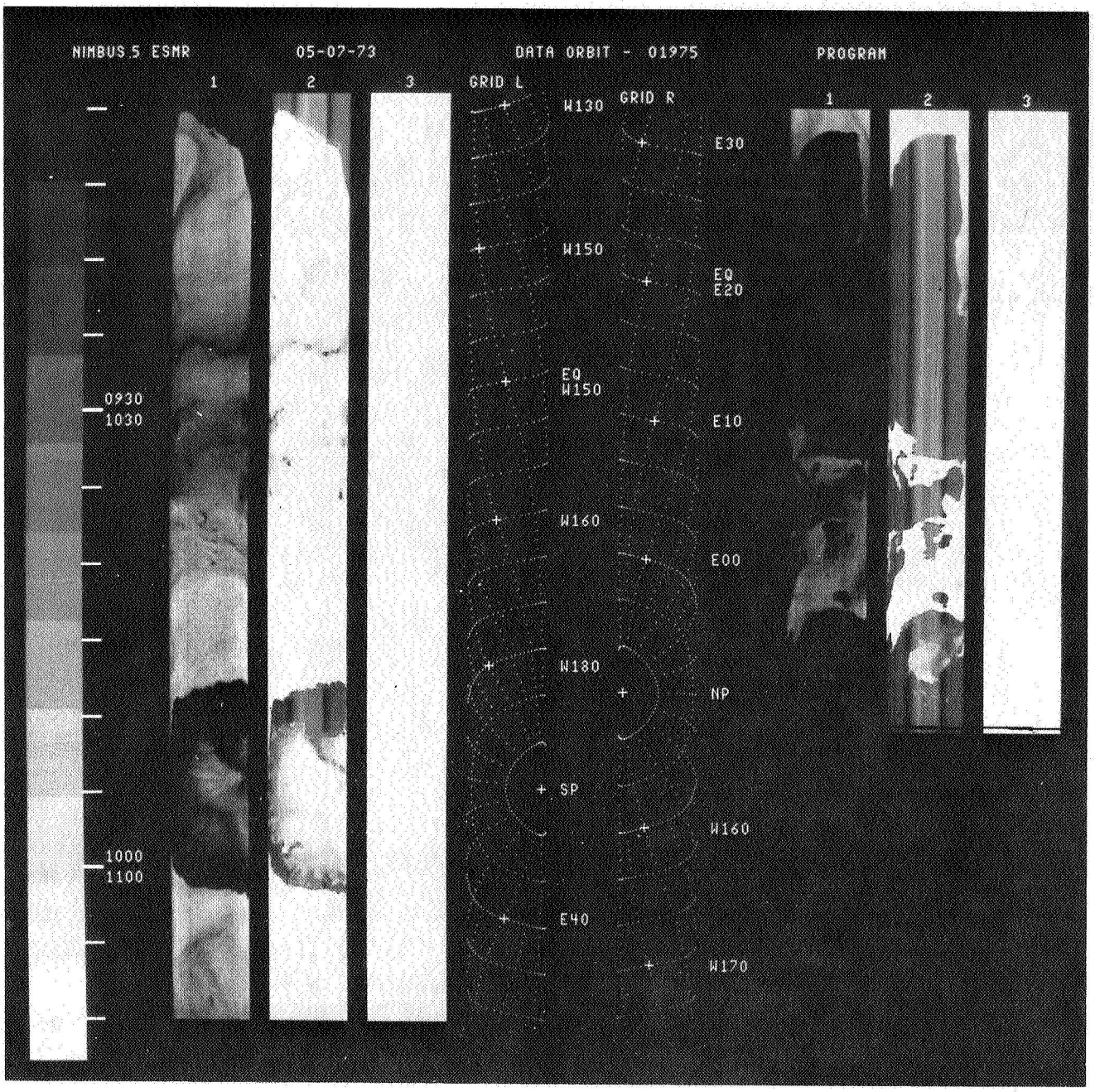

NIMBUS 5 ESMR
05-02-73
DATA ORBIT - 01911
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
1500
1600
1530
1630
E140
W50
E130
EQ
W60
EQ
E120
W70
E110
W80
E100
NP
SP
E120
W40

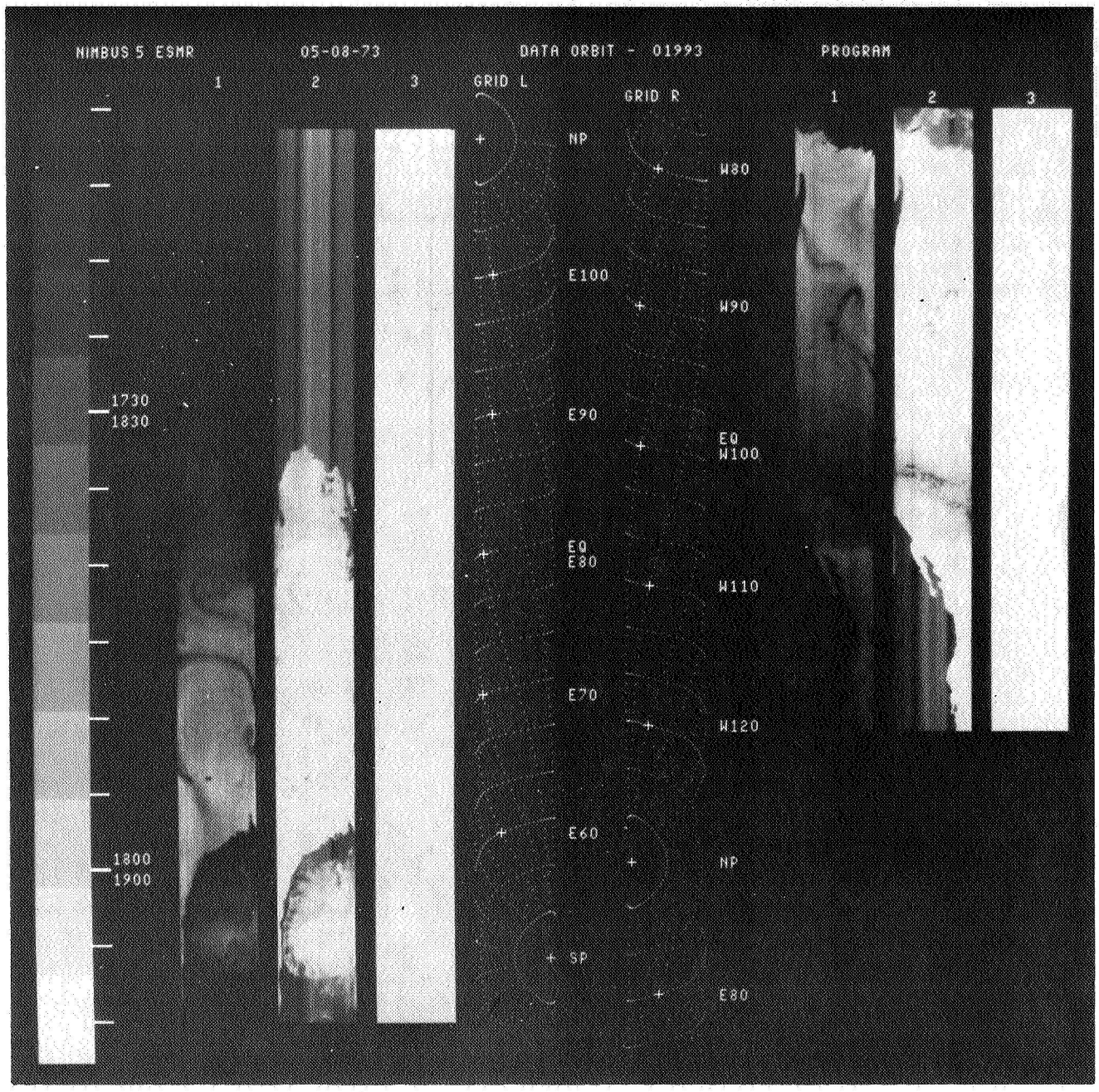

NIMBUS 5 ESMR
05-03-73
DATA ORBIT - 01926
PROGRAM
1
2
3
GRID L
1730
1830
1800
1900
NP
E100
E90
EQ
E80
E70
E60
SP
GRID R
W80
W100
EQ
W100
W110
W130
NP
E80
1
2
3

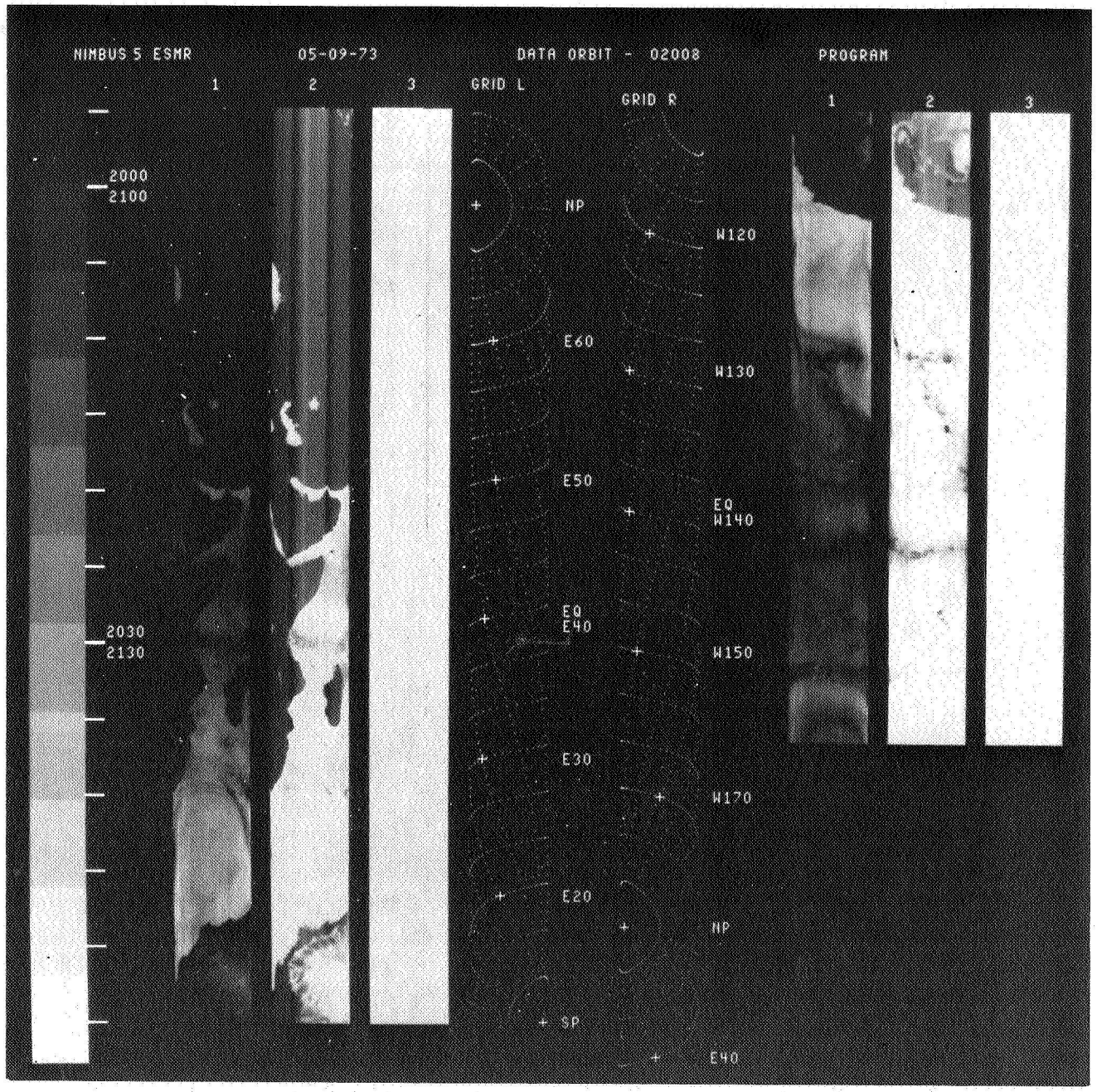

NIMBUS 5 ESMR
05-04-73
DATA ORBIT - 01939
PROGRAM
1
2
3
GRID L
GRID R
NP
W70
E110
W80
E100
EQ
W90
EQ
E90
W100
E80
W110
E70
NP
SP
E90
1700
1800
1730
1830

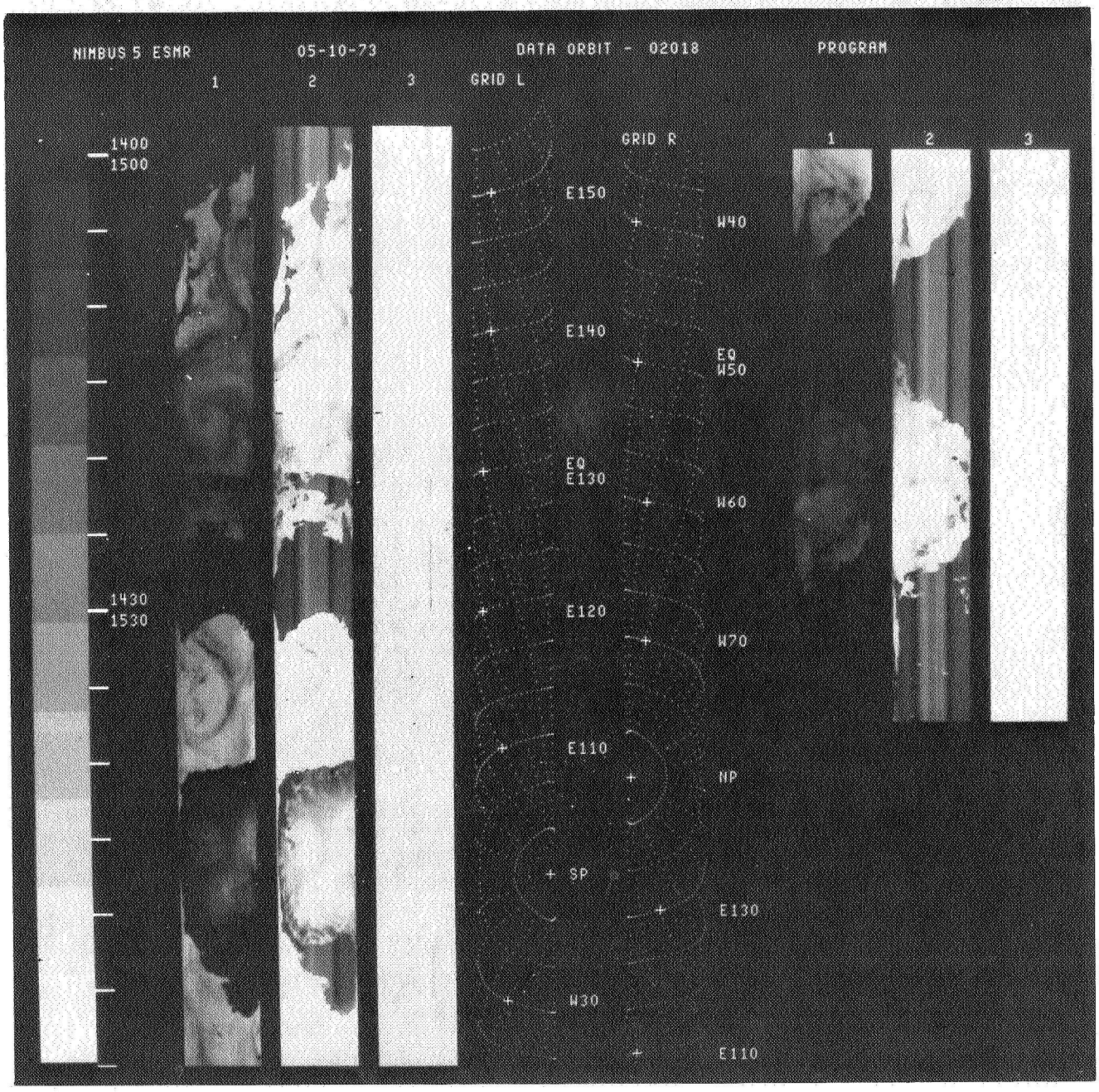

NIMBUS 5 ESMR
05-05-73
DATA ORBIT - 01946
PROGRAM
1
2
3
GRID L
GRID R
E90
W90
EQ
E80
EQ
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W100
E60
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SP
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E100
W120
0530
0630
0600
0700

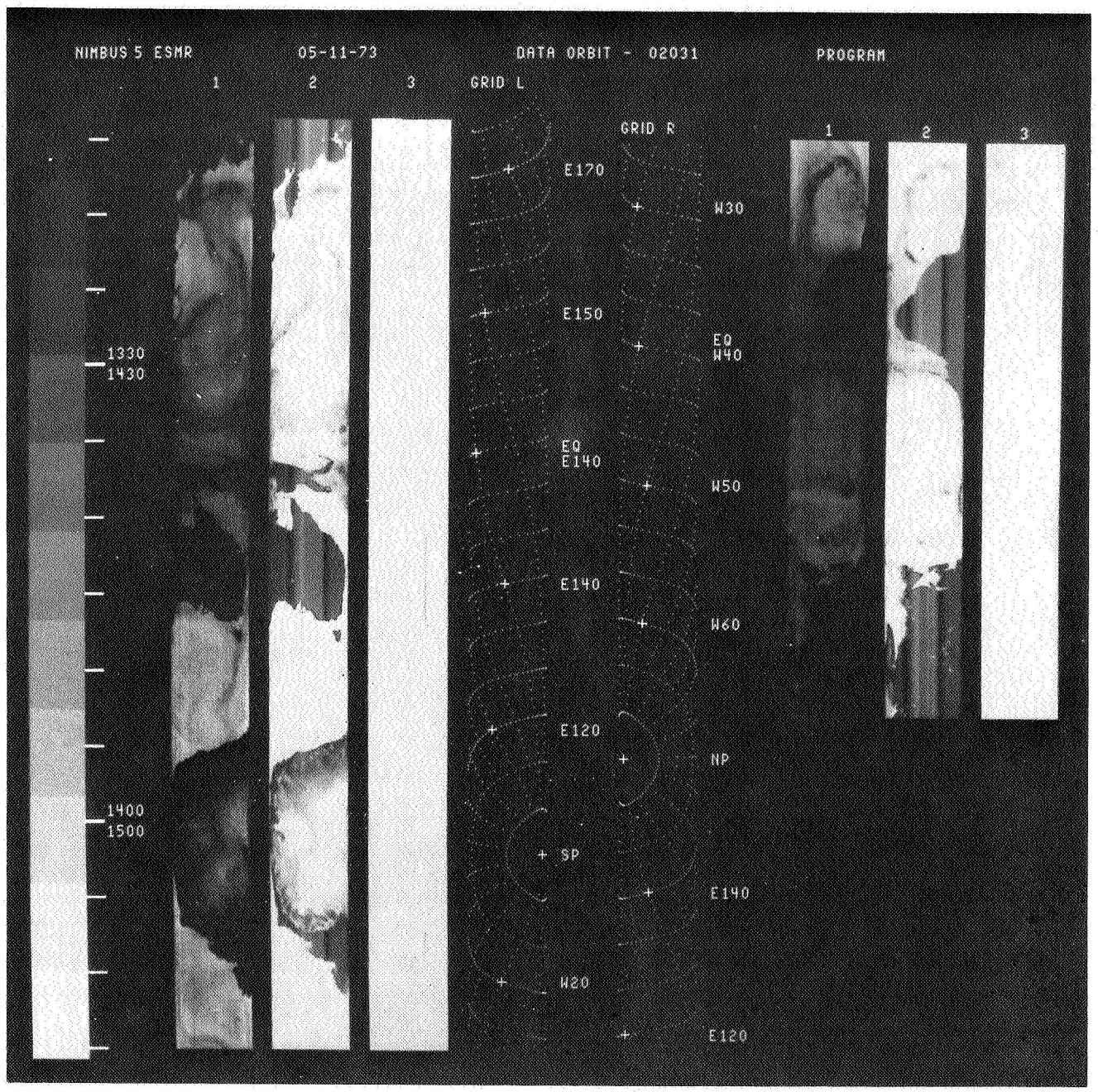

NIMBUS 5 ESMR
05-06-73
DATA ORBIT - 01958
PROGRAM
1
2
3
GRID L
GRID R
0300
0400
0330
0430
W50
EQ
E120
EQ
W60
E110
W70
E100
W80
NP
SP
W60
E140
W80
E130
EQ
W90

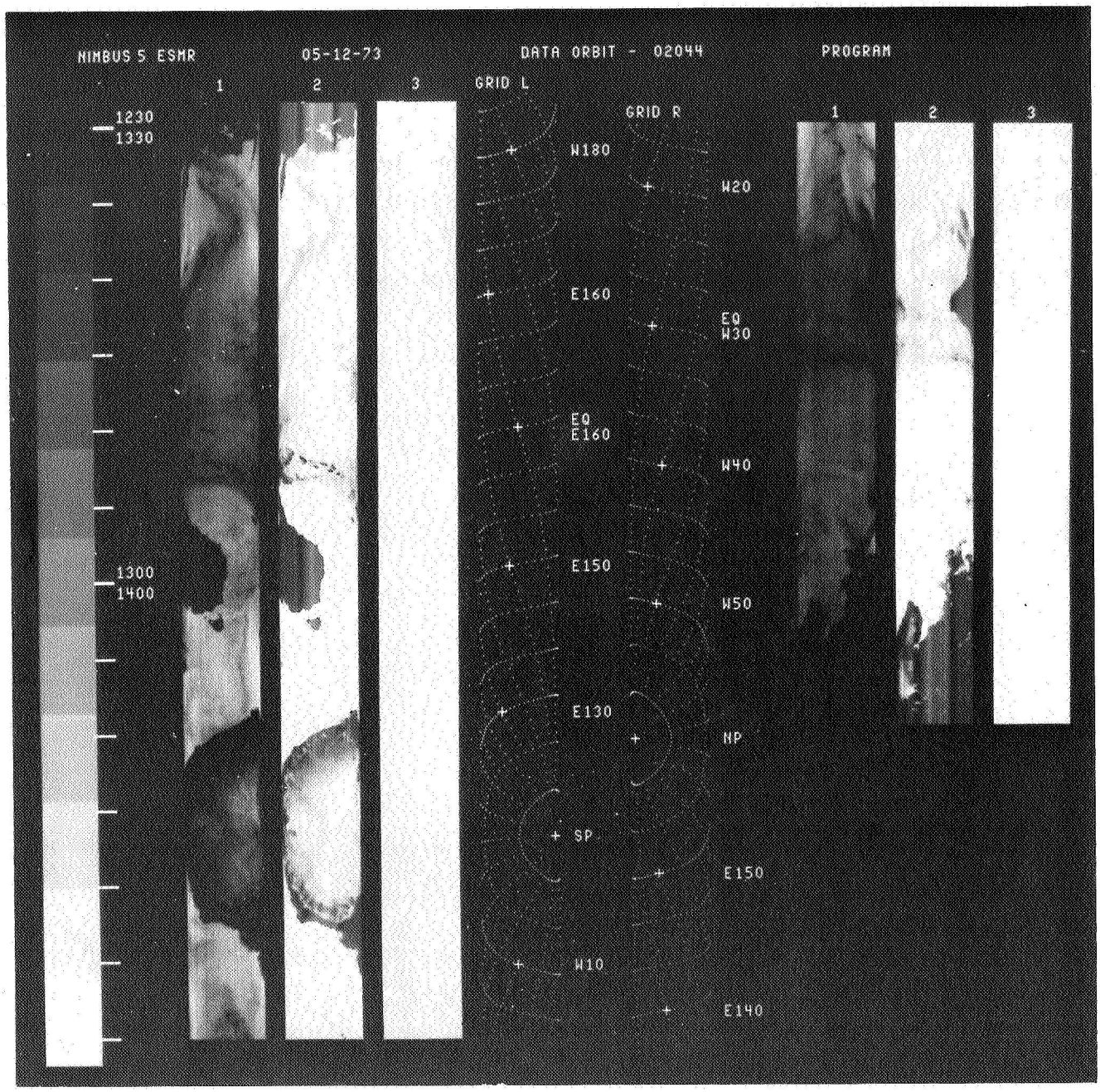

NIMBUS 5 ESMR
05-07-73
DATA ORBIT - 01975
PROGRAM
1
2
3
GRID L
GRID R
W130
E30
W150
EQ
E20
EQ
W150
E10
W160
E00
W180
NP
SP
W160
E40
W170
0930
1030
1000
1100

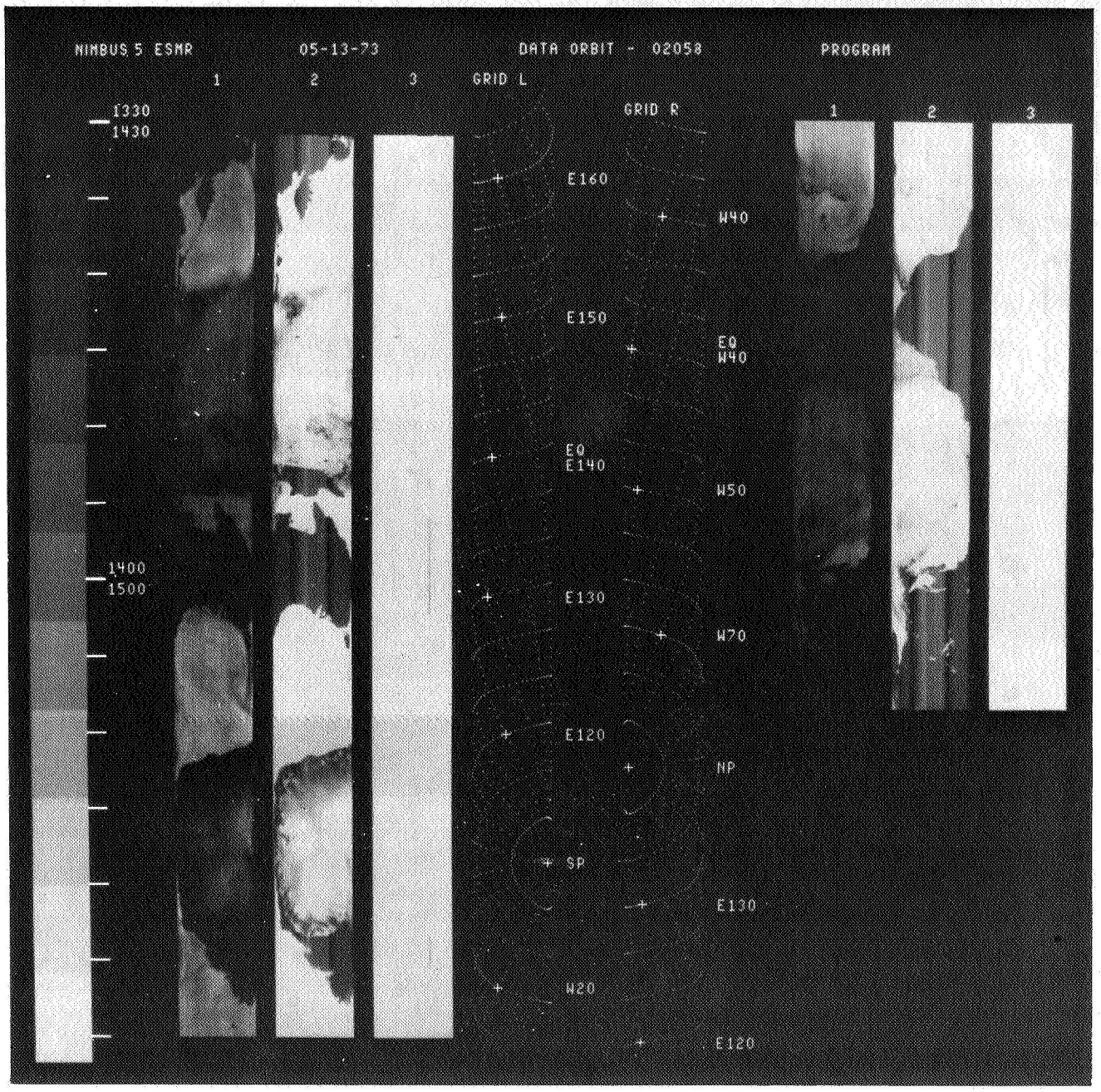

NIMBUS 5 ESMR
05-08-73
DATA ORBIT - 01993
PROGRAM
1
2
3
GRID L
GRID R
NP
W80
E100
W90
E90
EQ
W100
EQ
E80
W110
E70
W120
E60
NP
SP
E80
1730
1830
1800
1900

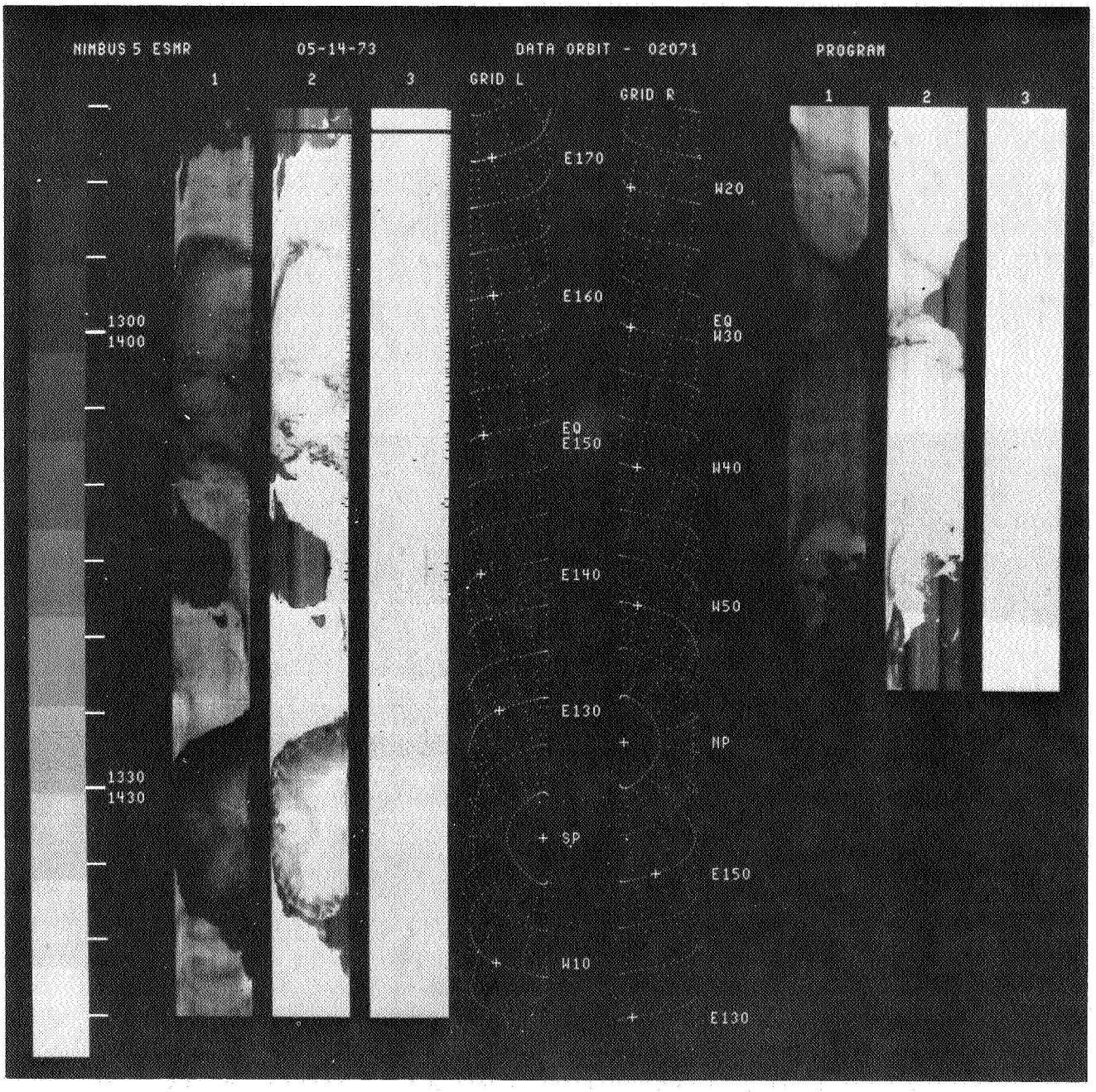

NIMBUS 5 ESMR
05-09-73
DATA ORBIT - 02008
PROGRAM
1
2
3
GRID L
GRID R
2000
2100
2030
2130
NP
W120
E60
W130
E50
EQ
W140
EQ
E40
W150
E30
W170
E20
NP
SP
E40

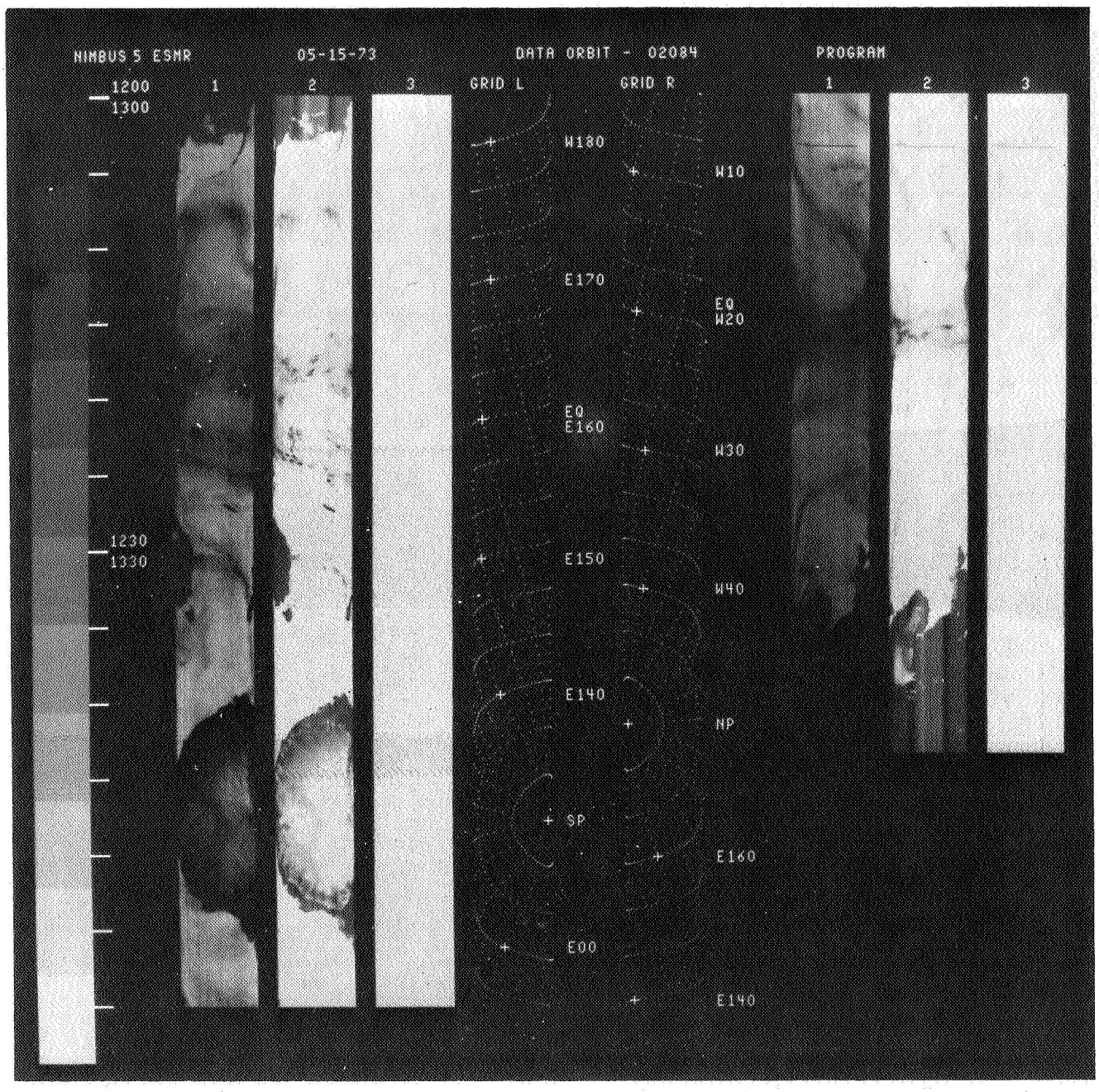

NIMBUS 5 ESMR
05-10-73
DATA ORBIT - 02018
PROGRAM
1
2
3
GRID L
GRID R
1400
1500
1430
1530
E150
W40
E140
EQ
W50
EQ
E130
W60
E120
W70
E110
NP
SP
E130
W30
E110

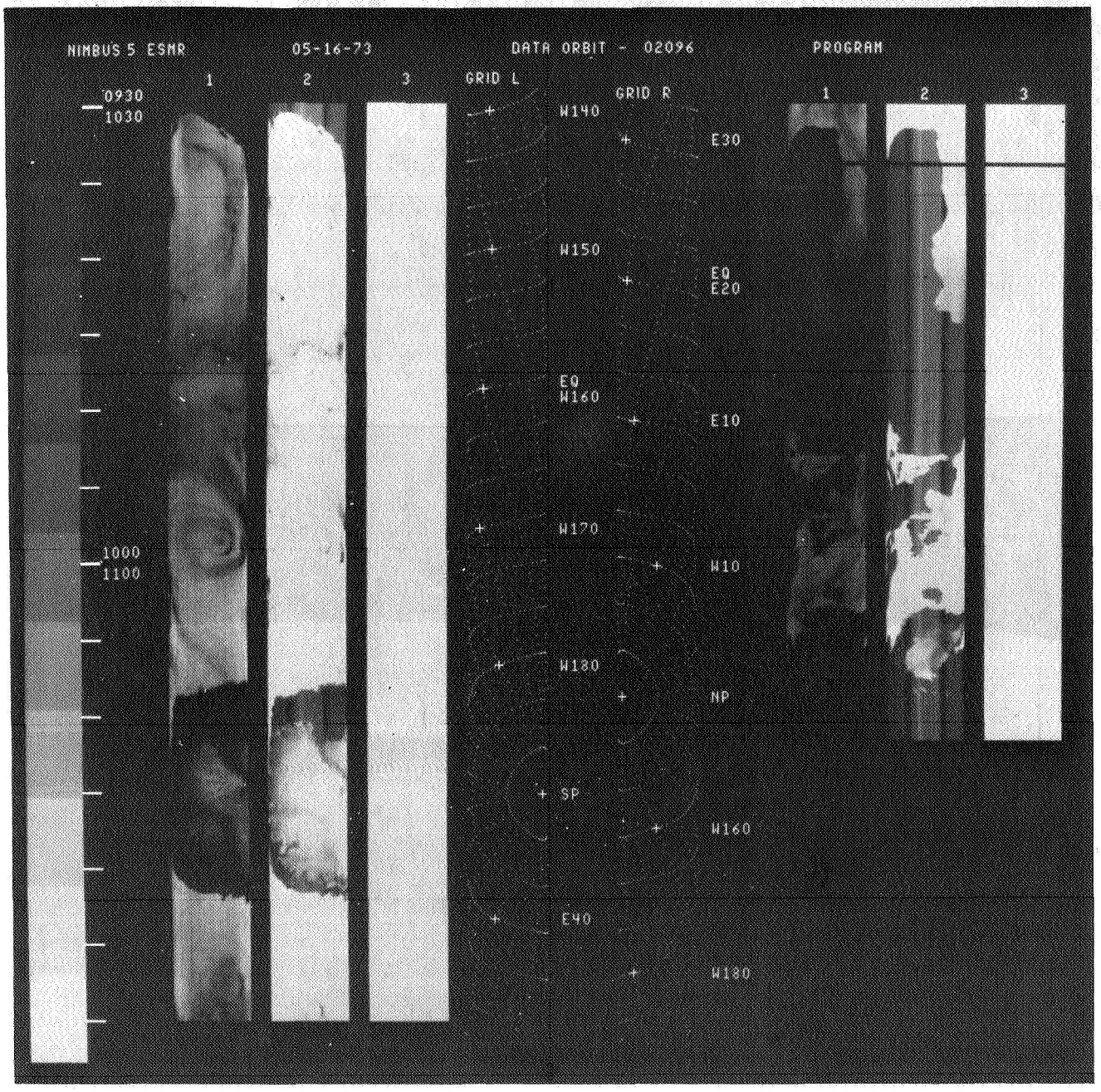

NIMBUS 5 ESMR
05-11-73
DATA ORBIT - 02031
PROGRAM
1
2
3
GRID L
GRID R
1330
1430
1400
1500
E170
W30
E150
EQ
W40
EQ
E140
W50
E140
W60
E120
NP
SP
E140
W20
E120

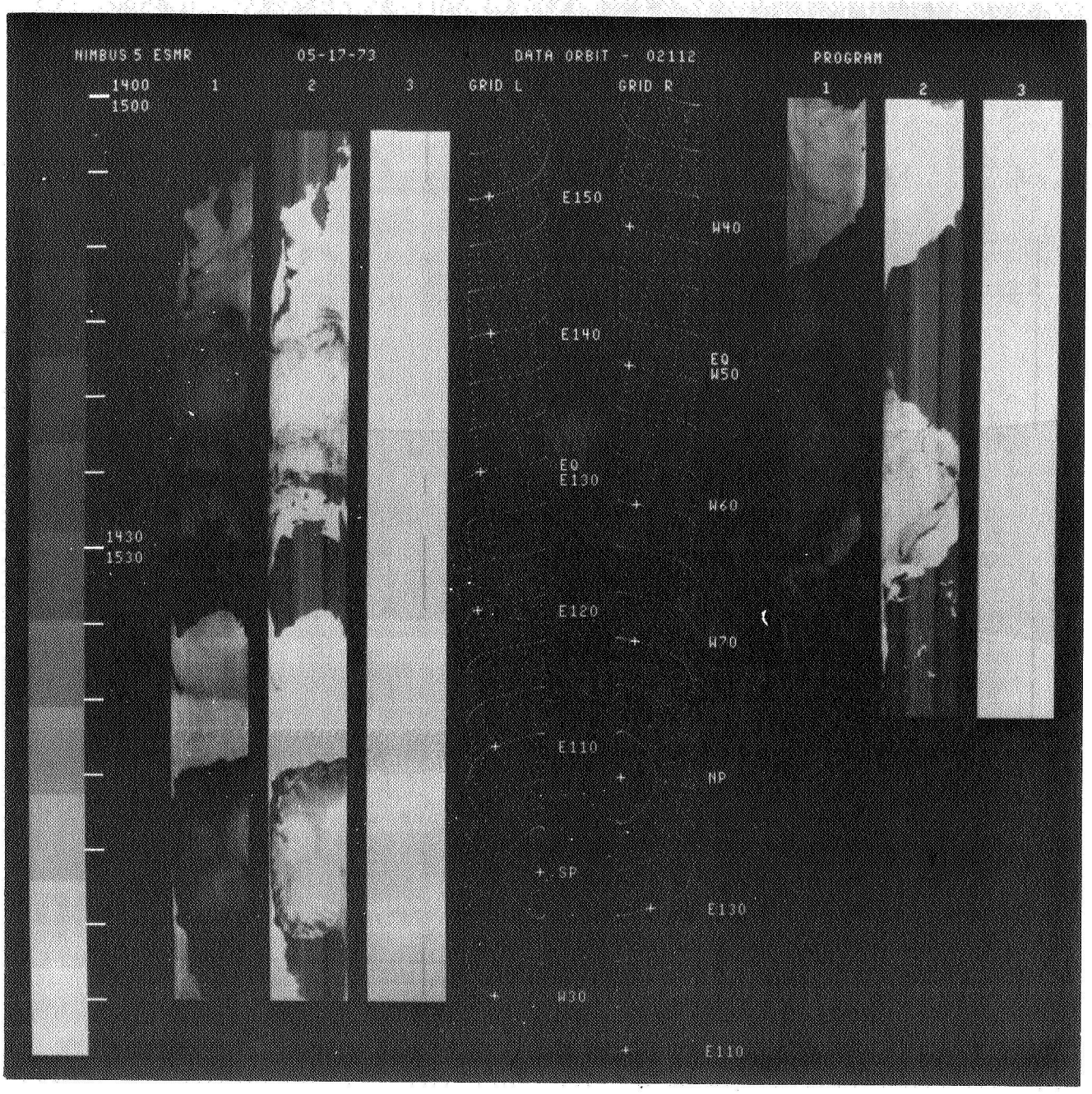

NIMBUS 5 ESMR
05-12-73
DATA ORBIT - 02044
PROGRAM
1
2
3
GRID L
GRID R
1230
1330
1300
1400
W180
W20
E160
EQ
W30
EQ
E160
W40
E150
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E130
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SP
E150
W10
E140

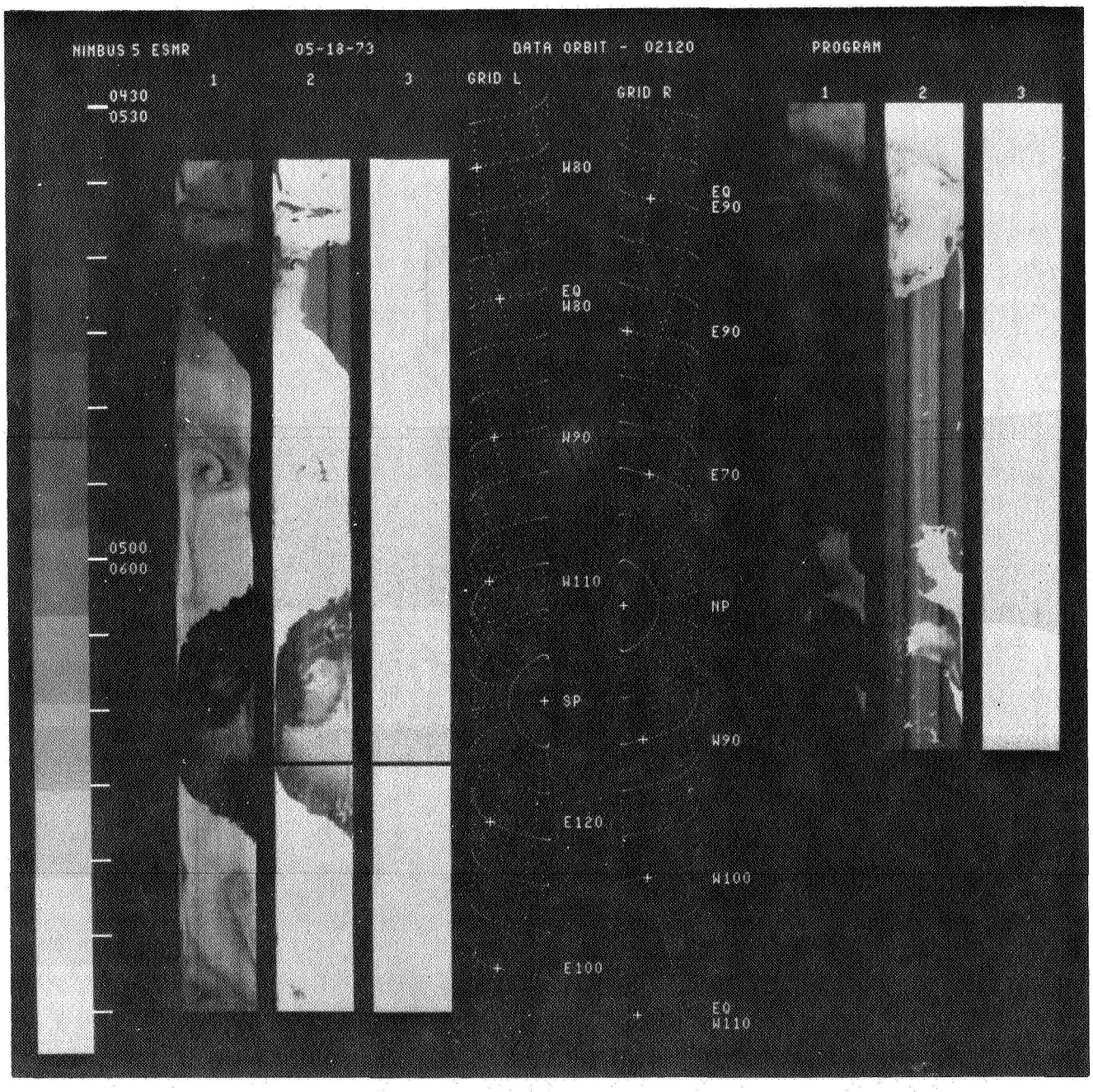

NIMBUS 5 ESMR
05-13-73
DATA ORBIT - 02058
PROGRAM
1
2
3
GRID L
GRID R
1330
1430
1400
1500
E160
W40
E150
EQ
W40
EQ
E140
W50
E130
W70
E120
NP
SP
E130
W20
E120

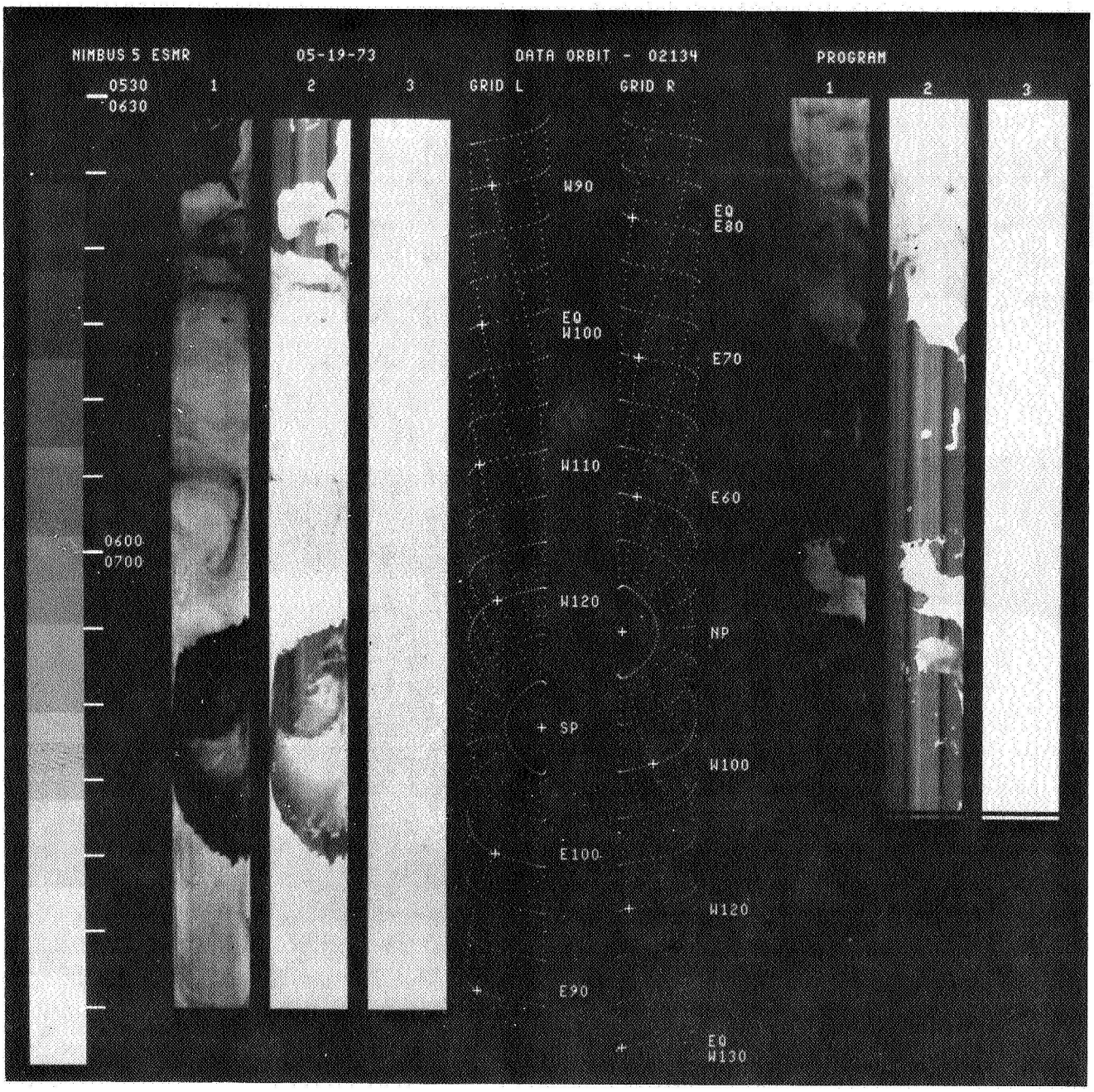

NIMBUS 5 ESMR
05-14-73
DATA ORBIT - 02071
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E170
W20
E160
EQ
W30
EQ
E150
W40
E140
W50
E130
NP
SP
E150
W10
E130
1300
1400
1330
1430

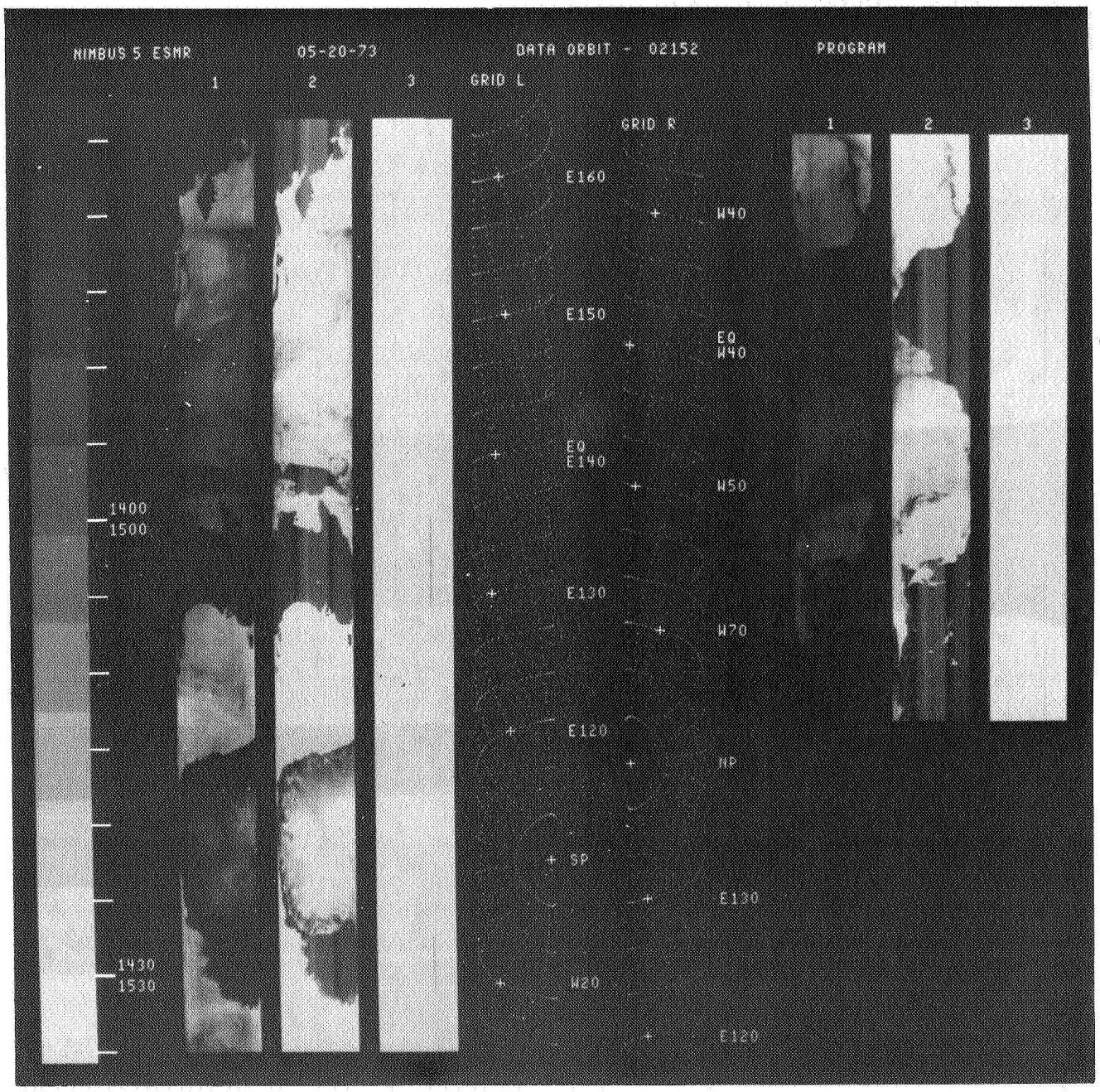

NIMBUS 5 ESMR
05-15-73
DATA ORBIT - 02084
PROGRAM
1200
1300
1230
1330
1
2
3
GRID L
GRID R
W180
W10
E170
EQ
W20
EQ
E160
W30
E150
W40
E140
NP
SP
E160
E00
E140

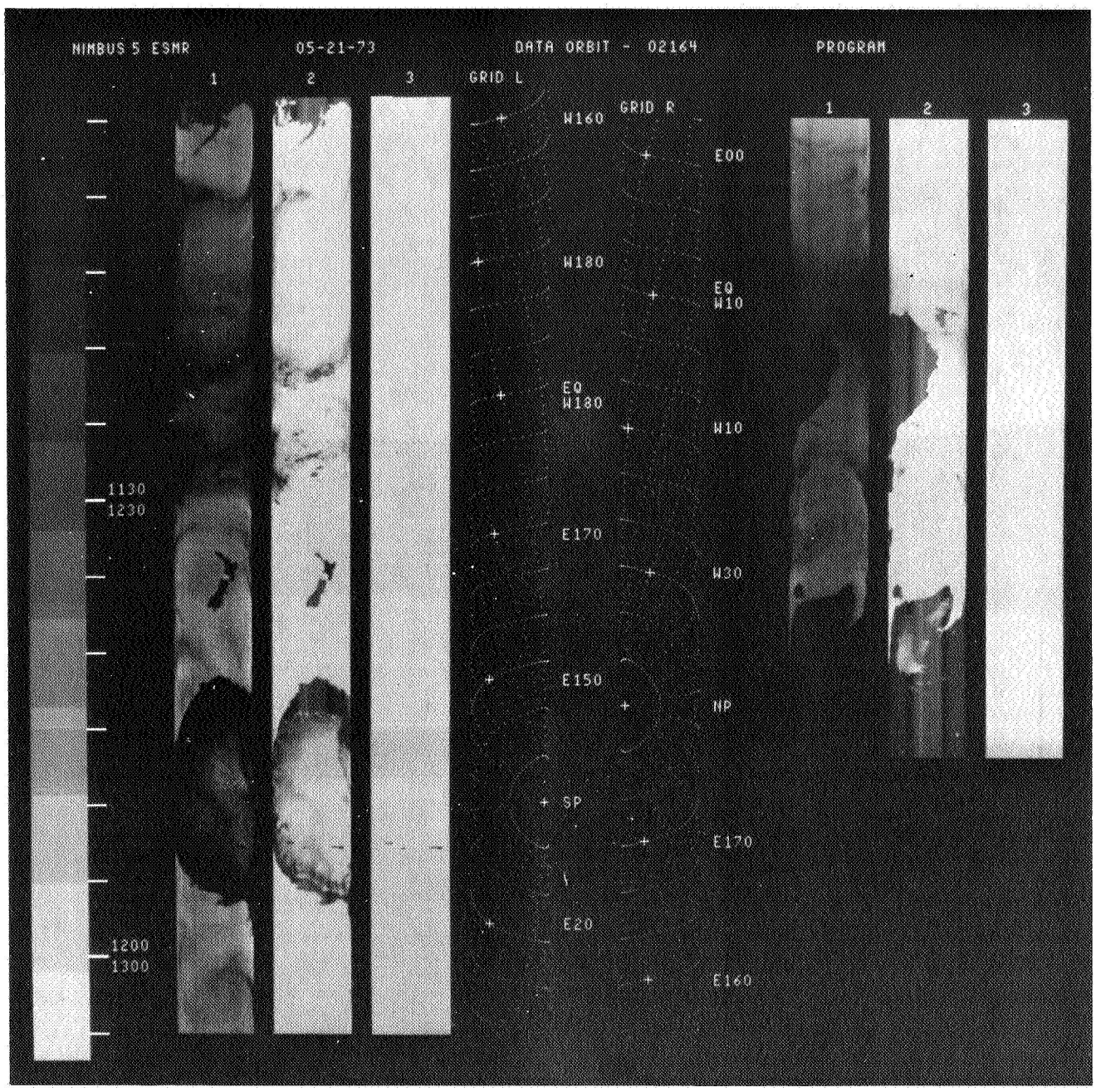

NIMBUS 5 ESMR
05-16-73
DATA ORBIT - 02096
PROGRAM
1
2
3
GRID L
GRID R
0930
1030
1000
1100
W140
E30
W150
EQ
E20
EQ
W160
E10
W170
W10
W180
NP
SP
W160
E40
W180

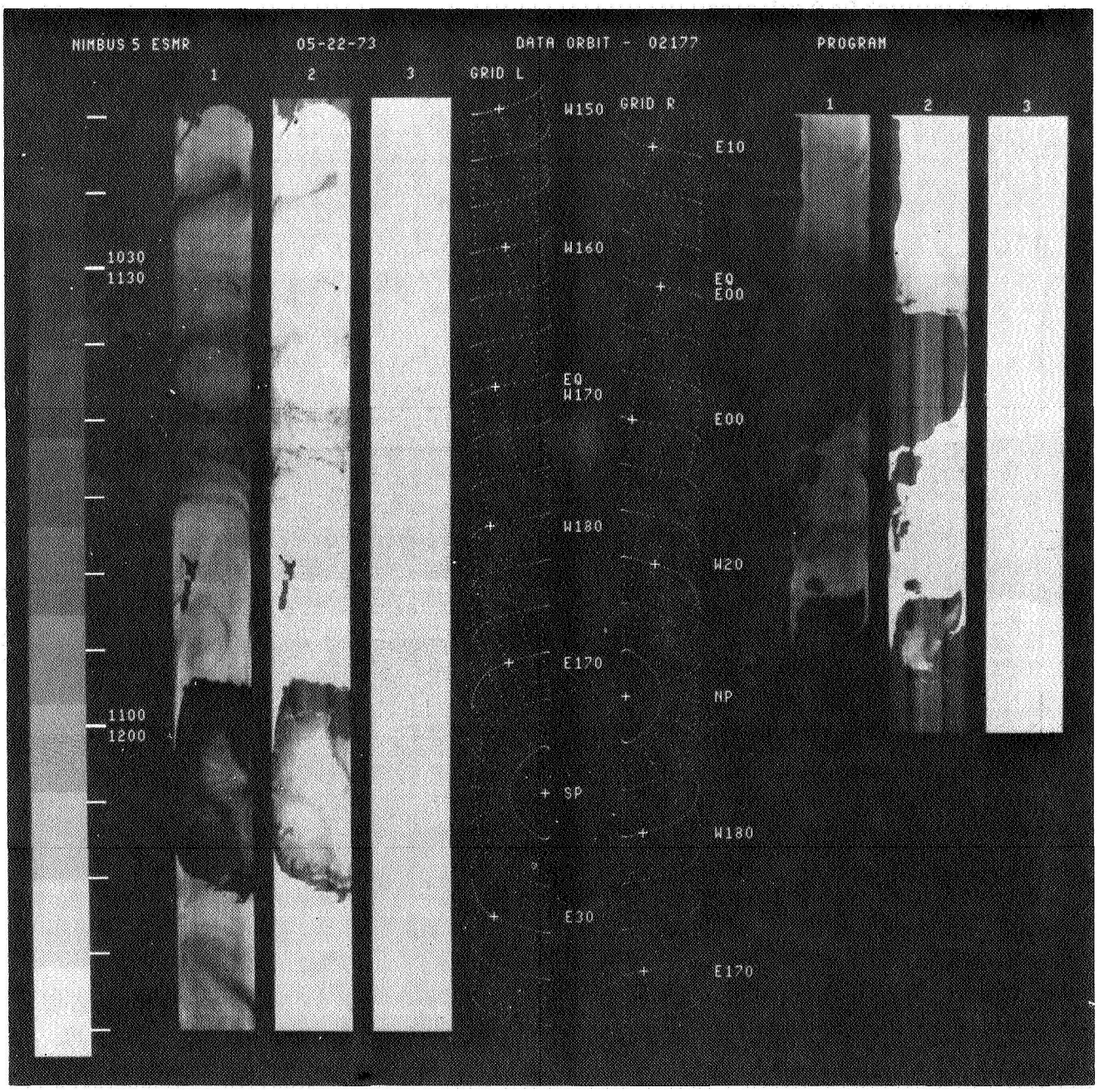

NIMBUS 5 ESMR
05-17-73
DATA ORBIT - 02112
PROGRAM
1400
1500
1
2
3
GRID L
GRID R
1
2
3
E150
W40
E140
EQ
W50
EQ
E130
W60
1430
1530
E120
W70
E110
NP
SP
E130
W30
E110

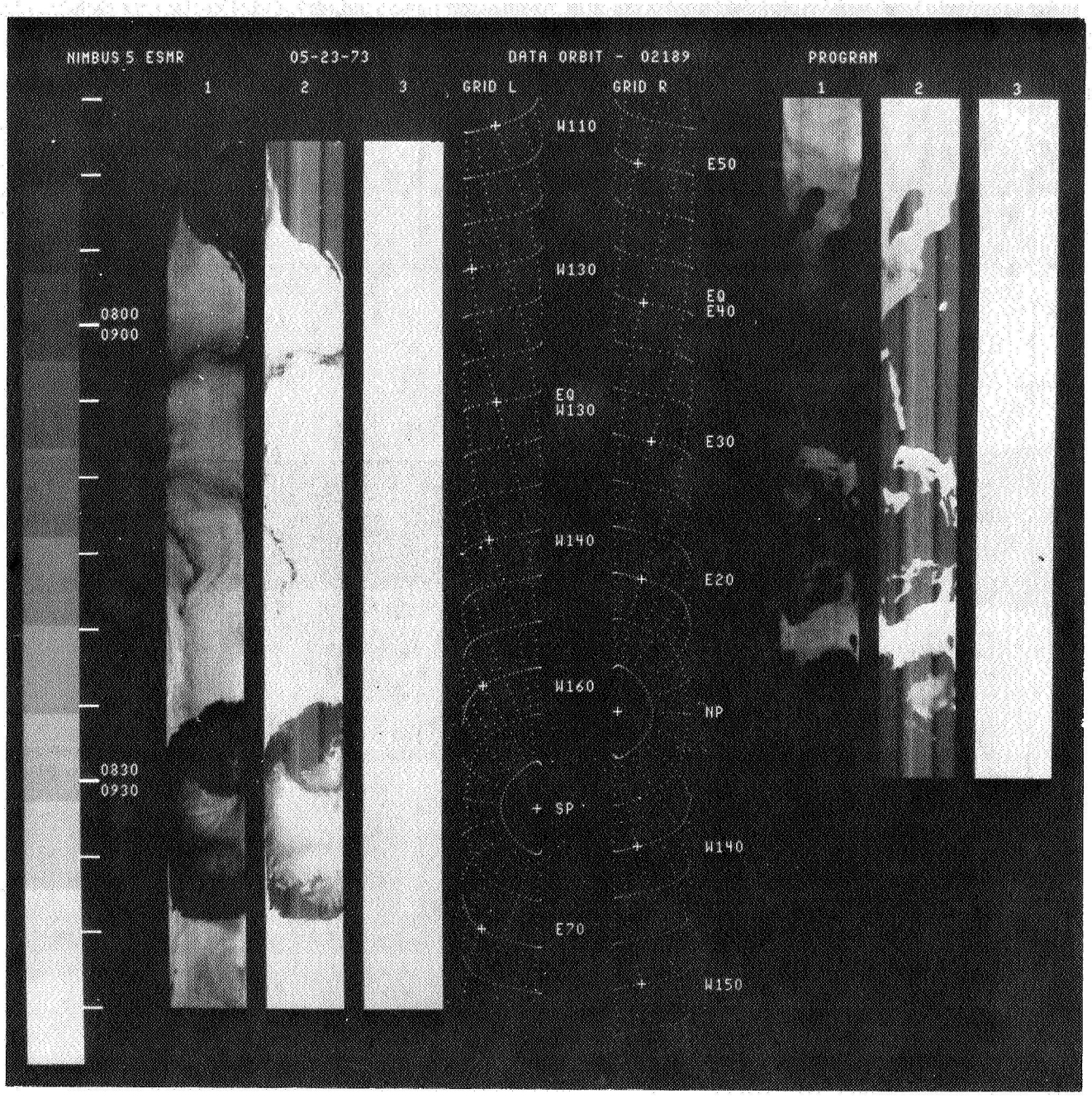

NIMBUS 5 ESMR
05-18-73
DATA ORBIT - 02120
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
0430
0530
0500
0600
W80
EQ
E90
EQ
W80
E90
W90
E70
W110
NP
SP
W90
E120
W100
E100
EQ
W110

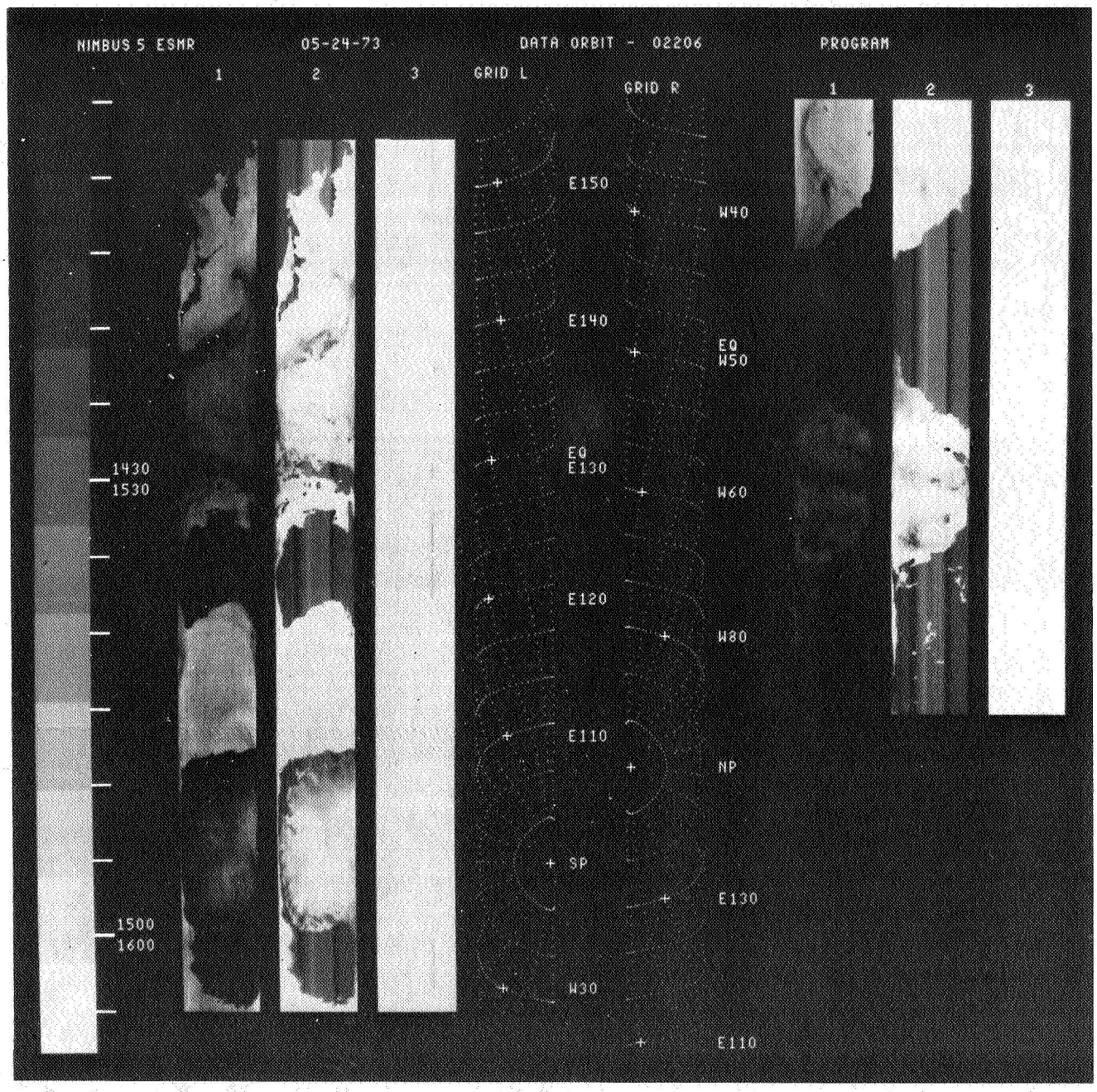

NIMBUS 5 ESMR
05-19-73
DATA ORBIT - 02134
PROGRAM
0530
0630
1
2
3
GRID L
GRID R
1
2
3
W90
EQ
E80
EQ
W100
E70
W110
E60
0600
0700
W120
NP
SP
W100
E100
W120
E90
EQ
W130

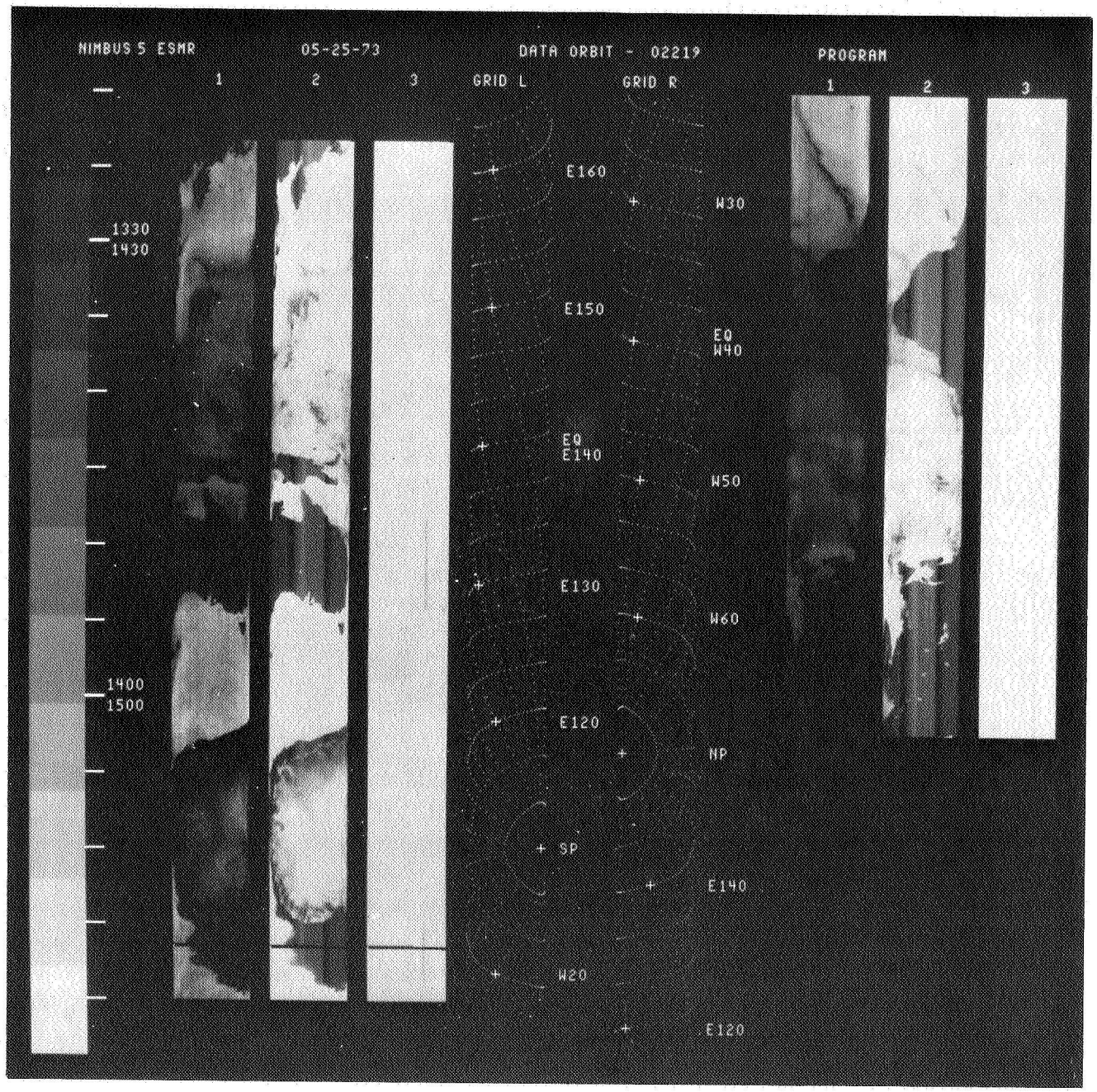

NIMBUS 5 ESMR
05-20-73
DATA ORBIT - 02152
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E160
W40
E150
EQ
W40
EQ
E140
W50
E130
W70
E120
NP
SP
E130
W20
E120
1400
1500
1430
1530

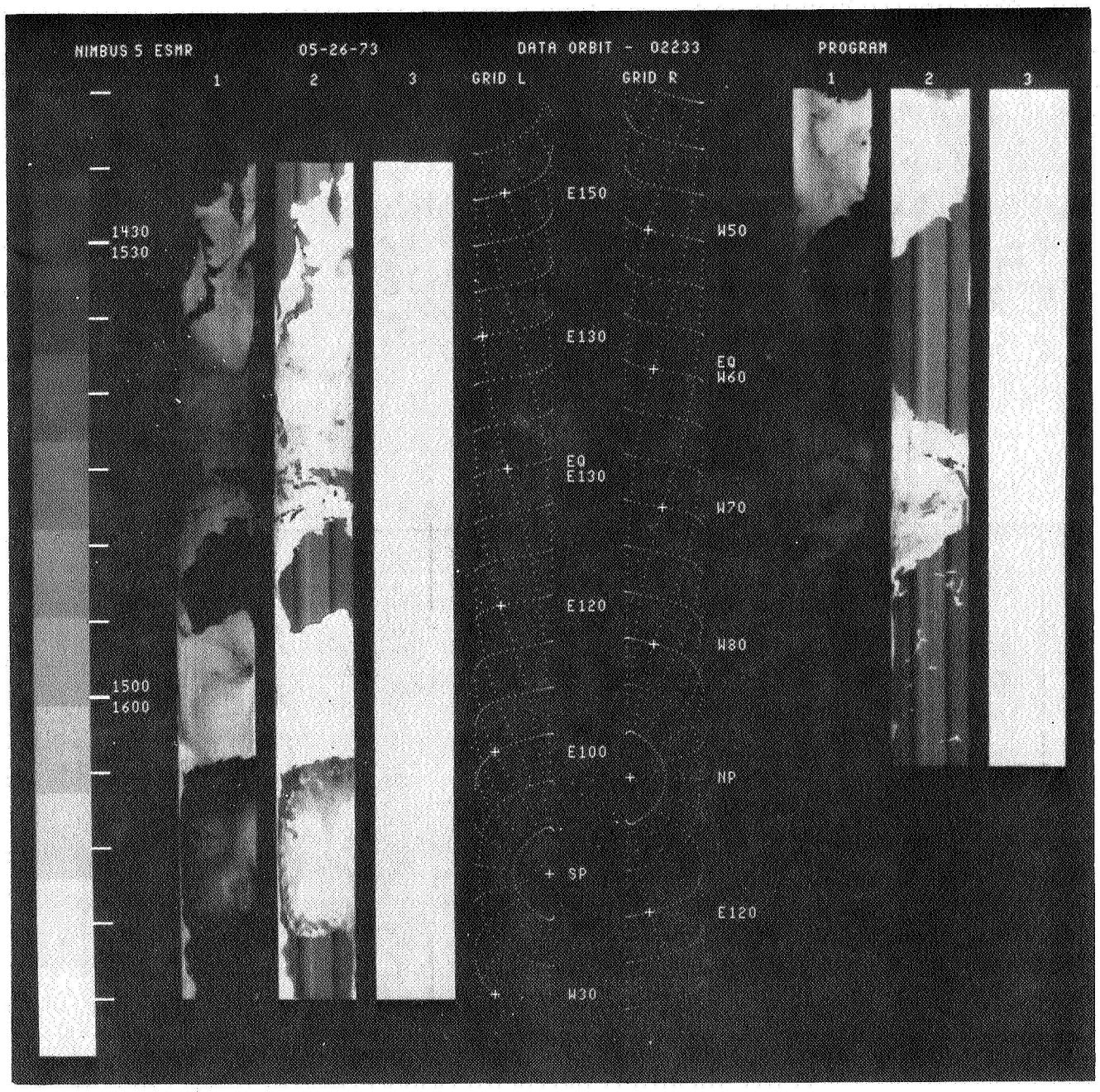

NIMBUS 5 ESMR
05-21-73
DATA ORBIT - 02164
PROGRAM
1
2
3
GRID L
GRID R
W160
E00
W180
EQ
W10
EQ
W180
W10
E170
W30
E150
NP
SP
E170
E20
E160
1130
1230
1200
1300

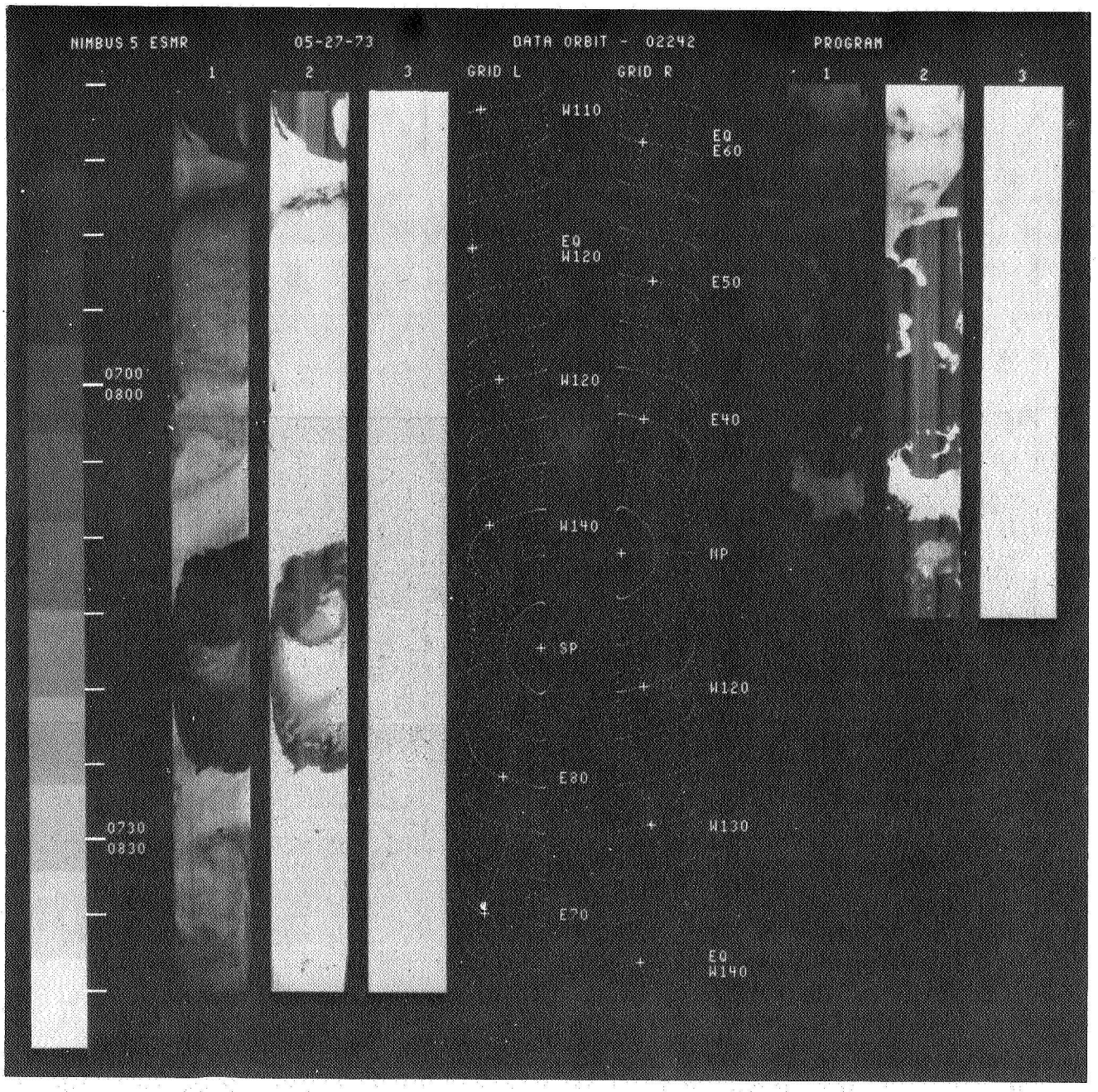

NIMBUS 5 ESMR
05-22-73
DATA ORBIT - 02177
PROGRAM
1
2
3
GRID L
GRID R
1030
1130
1100
1200
W150
E10
W160
EQ
E00
EQ
W170
E00
W180
W20
E170
NP
SP
W180
E30
E170

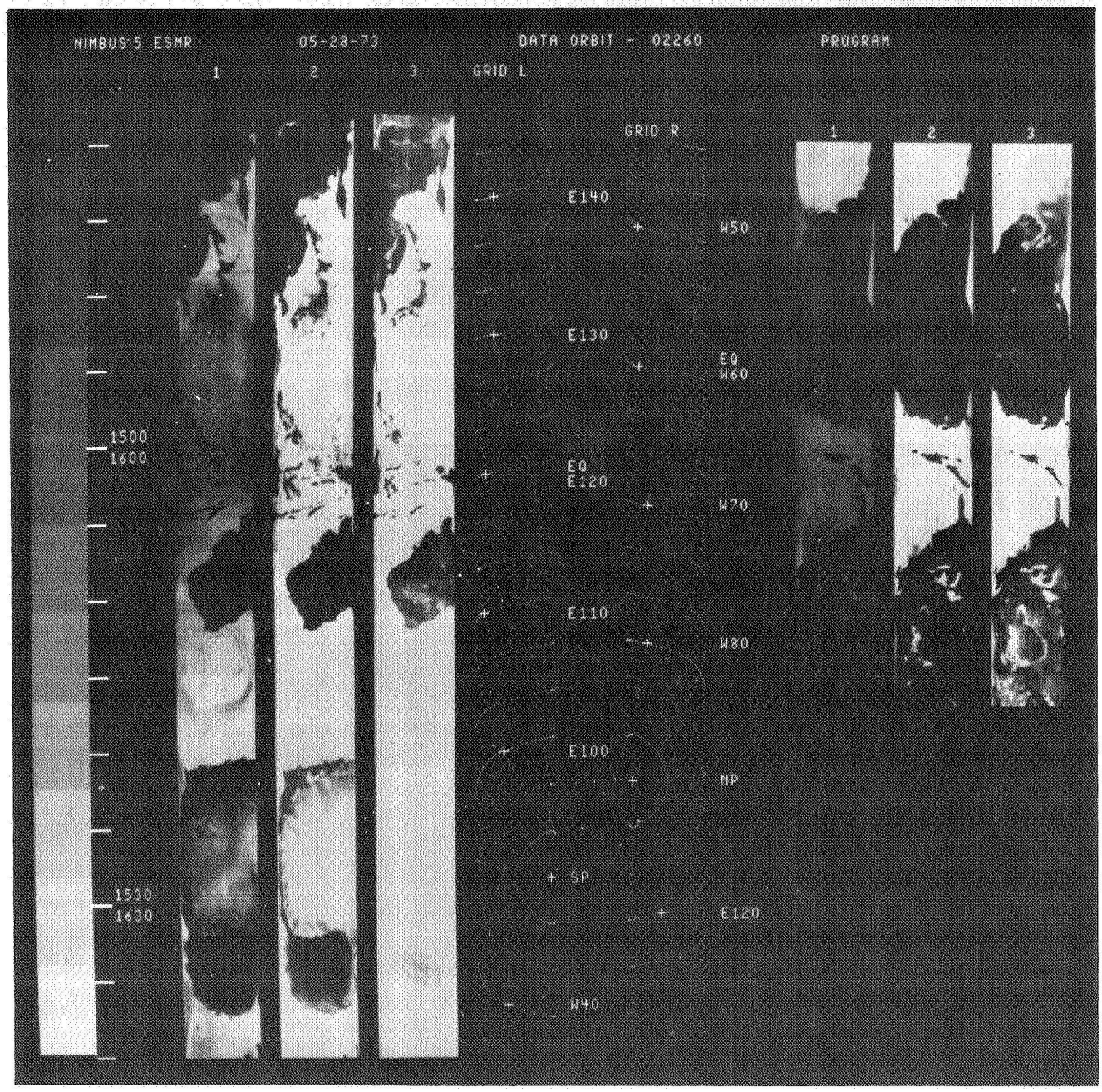

NIMBUS 5 ESMR
05-23-73
DATA ORBIT - 02189
PROGRAM
1
2
3
GRID L
GRID R
W110
E50
W130
EQ
E40
EQ
W130
E30
W140
E20
W160
NP
SP
W140
E70
W150
0800
0900
0830
0930

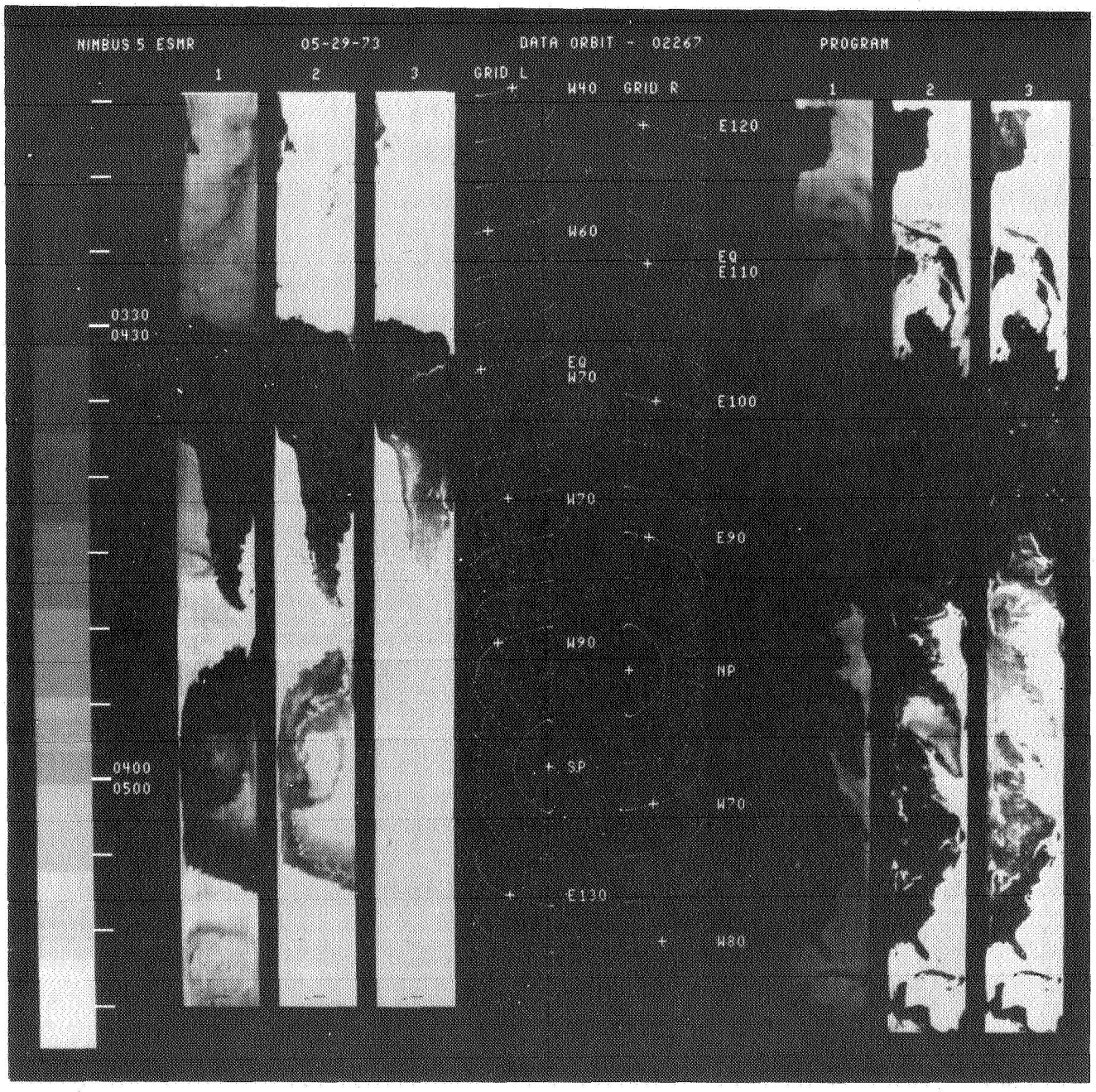

NIMBUS 5 ESMR
05-24-73
DATA ORBIT - 02206
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E150
W40
E140
EQ
W50
EQ
E130
W60
E120
W80
E110
NP
SP
E130
W30
E110
1430
1530
1500
1600

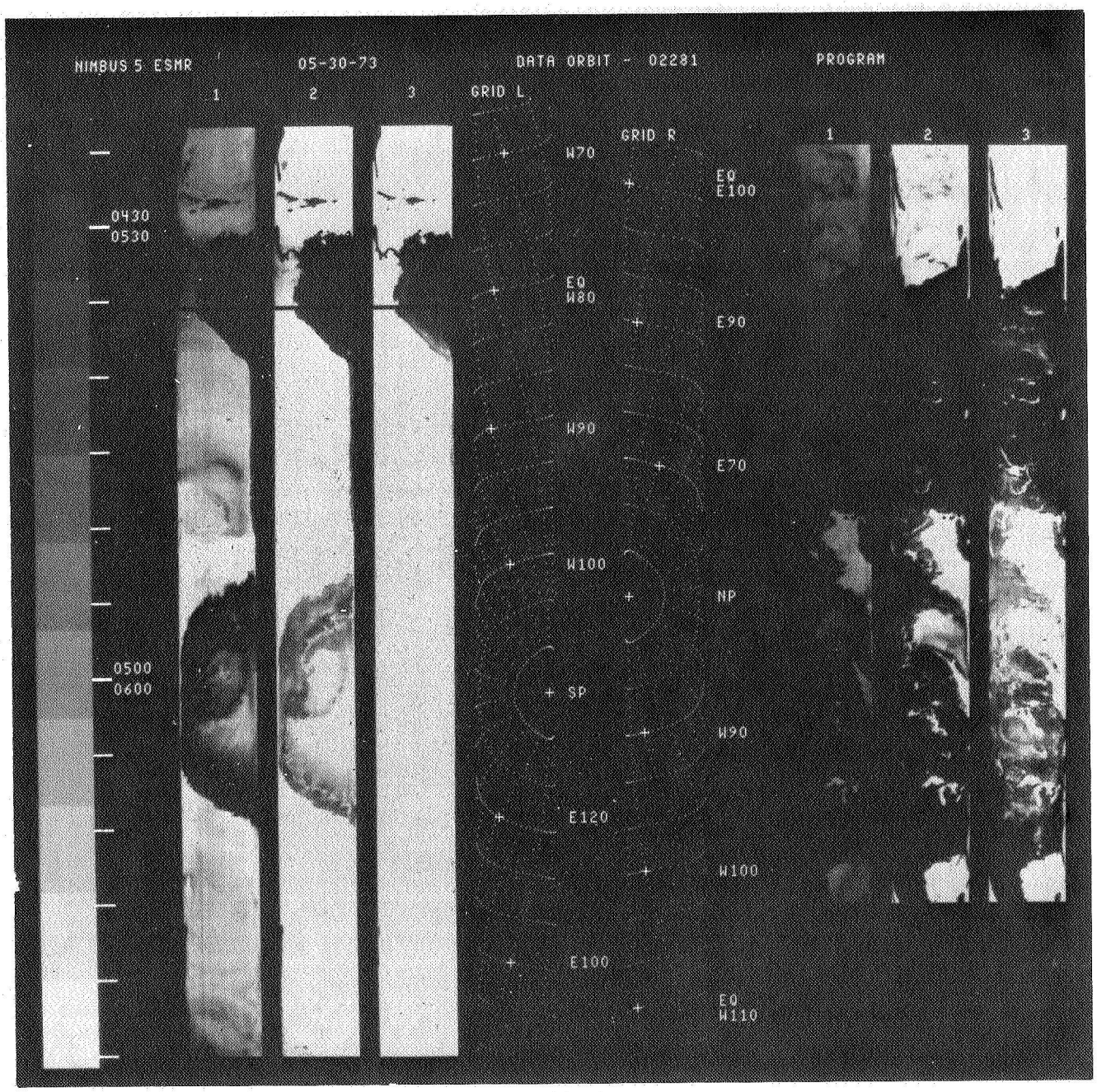

NIMBUS 5 ESMR
05-25-73
DATA ORBIT - 02219
PROGRAM
1
2
3
GRID L
GRID R
1330
1430
1400
1500
E160
W30
E150
EQ
W40
EQ
E140
W50
E130
W60
E120
NP
SP
E140
W20
E120

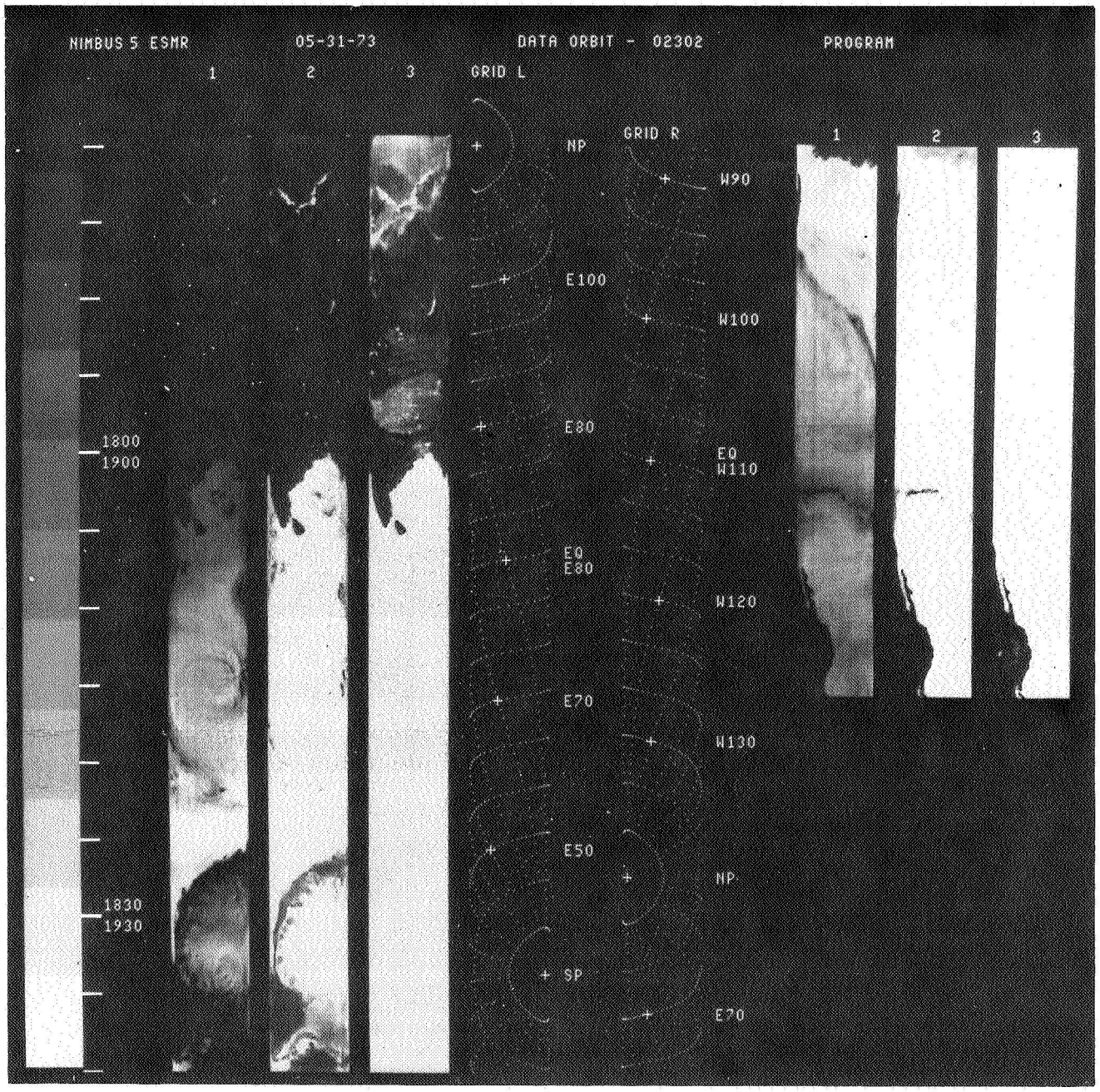

NIMBUS 5 ESMR
05-26-73
DATA ORBIT - 02233
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
1430
1530
1500
1600
E150
W50
E130
EQ
W60
EQ
E130
W70
E120
W80
E100
NP
SP
E120
W30


NIMBUS 5 ESMR
05-27-73
DATA ORBIT - 02242
PROGRAM
1
2
3
GRID L
GRID R
W110
EQ
E60
EQ
W120
E50
W120
E40
W140
NP
SP
W120
E80
W130
E70
EQ
W140
0700
0800
0730
0830


NIMBUS 5 ESMR
05-28-73
DATA ORBIT - 02260
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E140
W50
E130
EQ
W60
EQ
E120
W70
E110
W80
E100
NP
SP
E120
W40
1500
1600
1530
1630


NIMBUS 5 ESMR
05-29-73
DATA ORBIT - 02267
PROGRAM
1
2
3
GRID L
W40
GRID R
E120
W60
EQ
E110
0330
0430
EQ
W70
E100
W70
E90
W90
NP
0400
0500
SP
W70
E130
W80


NIMBUS 5 ESMR
05-30-73
DATA ORBIT - 02281
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W70
EQ
E100
0430
0530
EQ
W80
E90
W90
E70
W100
NP
0500
0600
SP
W90
E120
W100
E100
EQ
W110


NIMBUS 5 ESMR
05-31-73
DATA ORBIT - 02302
PROGRAM
1
2
3
GRID L
GRID R
NP
W90
E100
W100
E80
EQ
W110
EQ
E80
W120
E70
W130
E50
NP
SP
E70
1800
1900
1830
1930

SECTION 4

TEMPERATURE HUMIDITY INFRARED RADIOMETER MONTAGES

This section pictorially documents the data from the Temperature Humidity Infrared Radiometer subsystem carried on the Nimbus 5 Meteorological Satellite. Section 4.1 contains all nighttime THIR 11.5 and 6.7 micrometer montages and Section 4.2 contains all daytime THIR 11.5 and 6.7 micrometer montages, arranged in chronological order. Key latitudes can be read from the superposed grids. Grid points are identified where each swath crosses 60°N, 30°N, EQUATOR, 30°S, and 60°S.

Vellum Location Guide overlays, attached to the back of this document, may be used for general orientation with the data presented in each THIR montage. Proper alignment of the overlay grid is accomplished by matching the grid indices on the equator with the two "T" marks on each montage.

Each THIR montage is provided with a time scale to determine the Greenwich Mean Time limits required to order processed THIR grid print maps (see page 38, The Nimbus 5 User's Guide). The time scale is used to determine the number of minutes from ascending (daytime data) or descending (nighttime data) node time for the interval of data required. To obtain the GMT for daytime data, the measured time is to be added to the ascending node time in the northern hemisphere and subtracted in the southern hemisphere. For nighttime data, the measured time is to be subtracted from the descending node time in the northern hemisphere and added in the southern hemisphere. The ascending and descending node times are given in Table 2-2 of Section 2.

The following alternate procedure also establishes GMT limits. Knowing the latitude limits of the study area, the minutes from ascending or descending node can be directly interpolated from Table 4-1. These time values can then be added to or subtracted from node times given in Table 2-2 of Section 2.

A description of the THIR experiment and instructions for ordering THIR data may be found in The Nimbus 5 User's Guide, Section 2.

Table 4-1

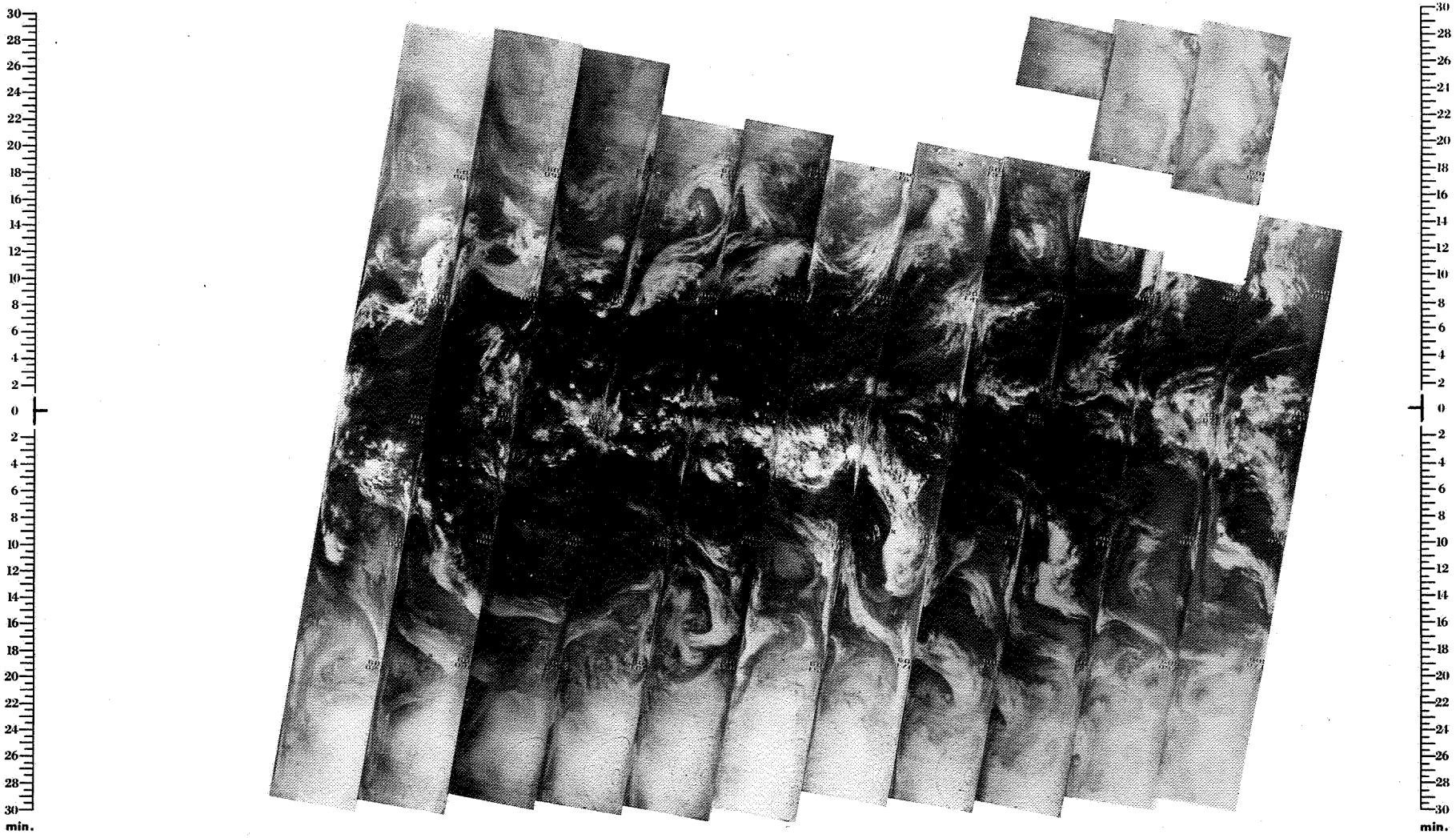
LATITUDE VERSUS MINUTES FROM
ASCENDING OR DESCENDING NODE

Latitude from AN or DN	Minutes and Seconds from AN or DN
0	0:00
5	1:31
10	3:02
15	4:33
20	6:03
25	7:34
30	9:05
35	10:36
40	12:08
45	13:40
50	15:12
55	16:44
60	18:18
65	19:52
70	21:33
75	23:26
78	24:44
80.1	26:49
78	29:00
75	30:09
70	31:51
65	33:35

SECTION 4.1

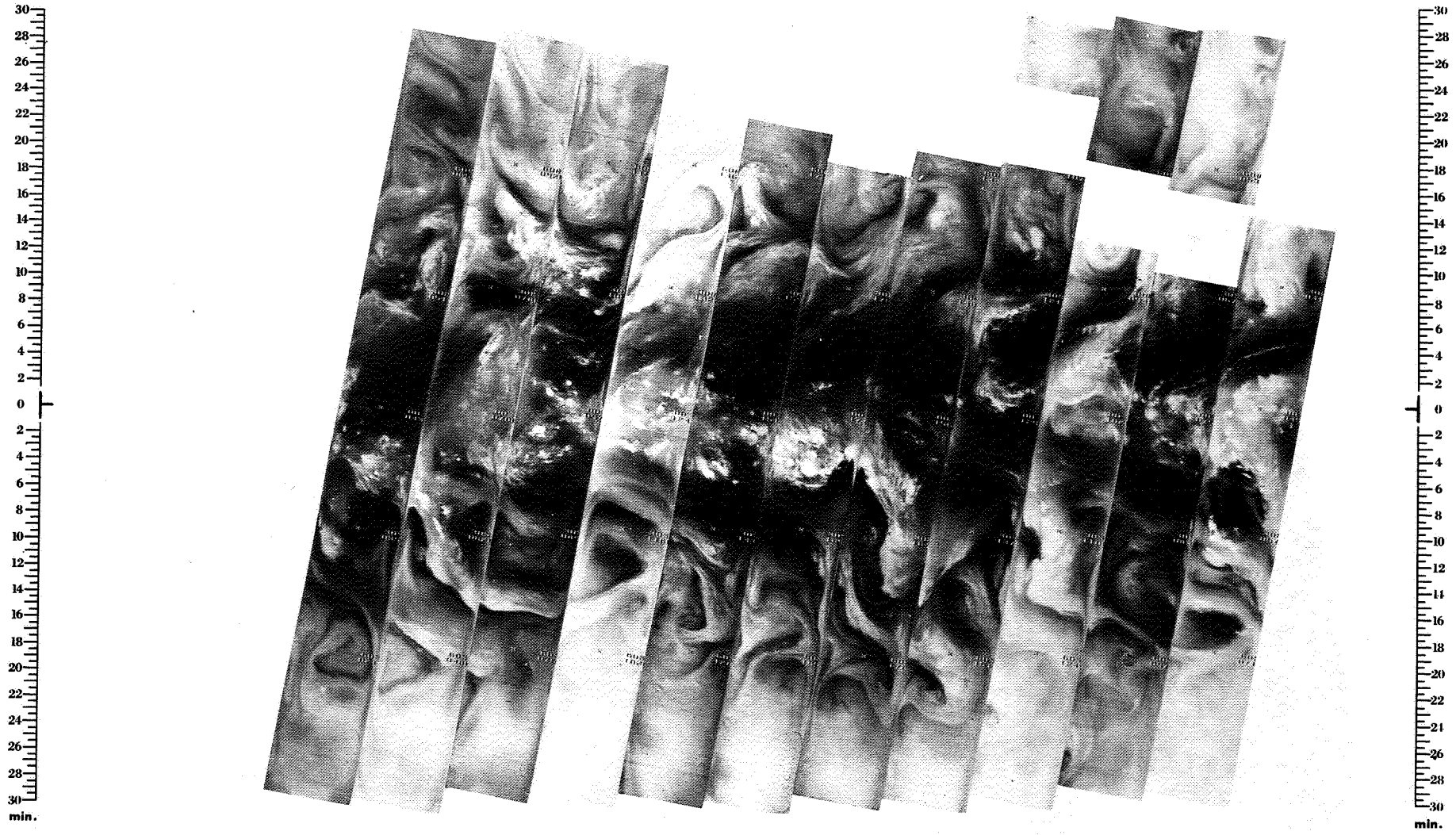
TEMPERATURE HUMIDITY INFRARED RADIOMETER

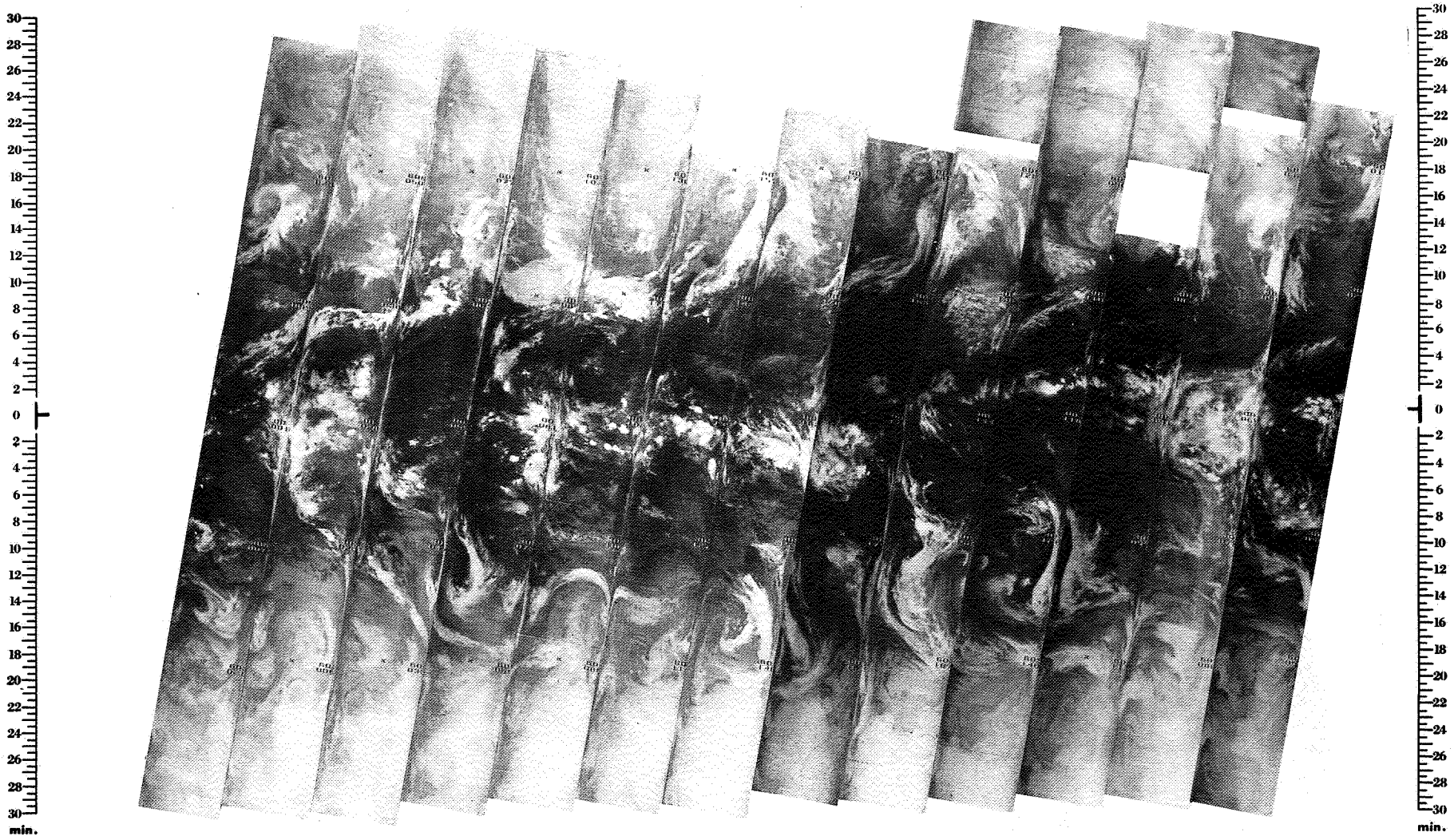
NIGHTTIME MONTAGES

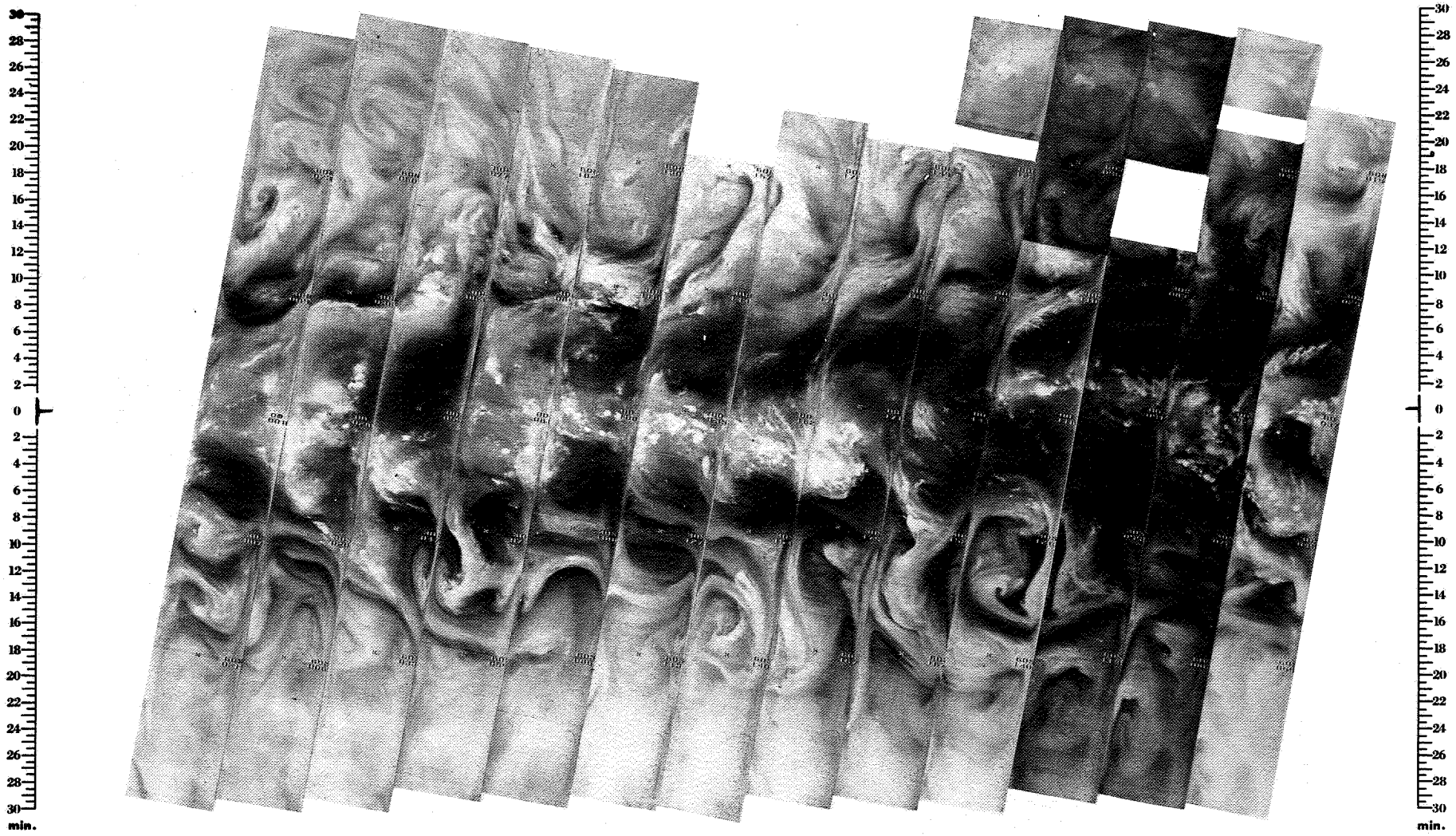


1 APRIL 1973

11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1499 1498 1497 1496 1495 1494 1493 1492 1491 1490 1489 1488 1487 1486
1 APRIL 1973
6.7 μm

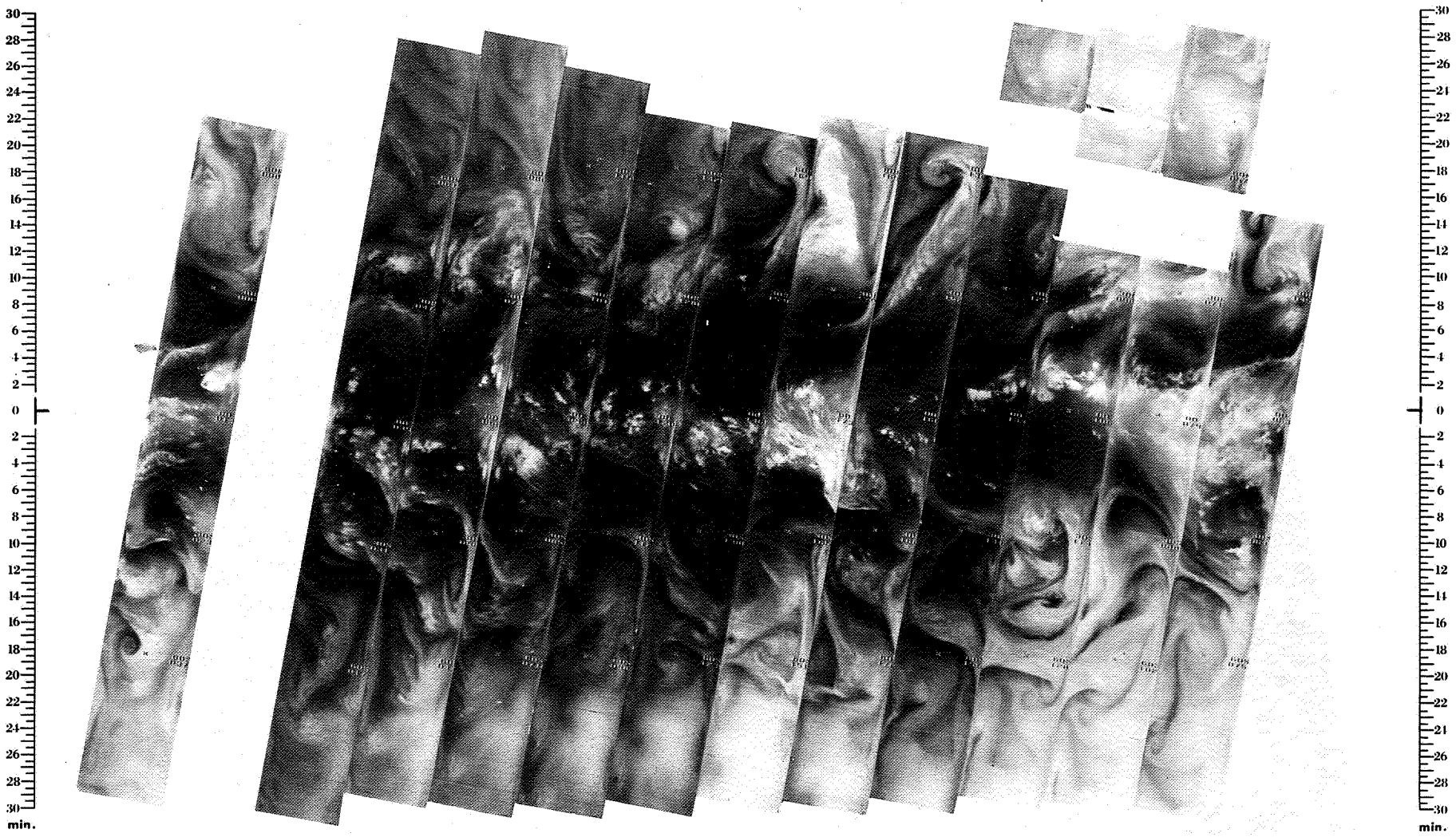

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1512 1511 1510 1509 1508 1507 1506 1505 1504 1503 1502 1501 1500
2 APRIL 1973
11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1512 1511 1510 1509 1508 1507 1506 1505 1504 1503 1502 1501 1500
2 APRIL 1973
6.7 μm



3 APRIL 1973

11.5 μm



3 APRIL 1973

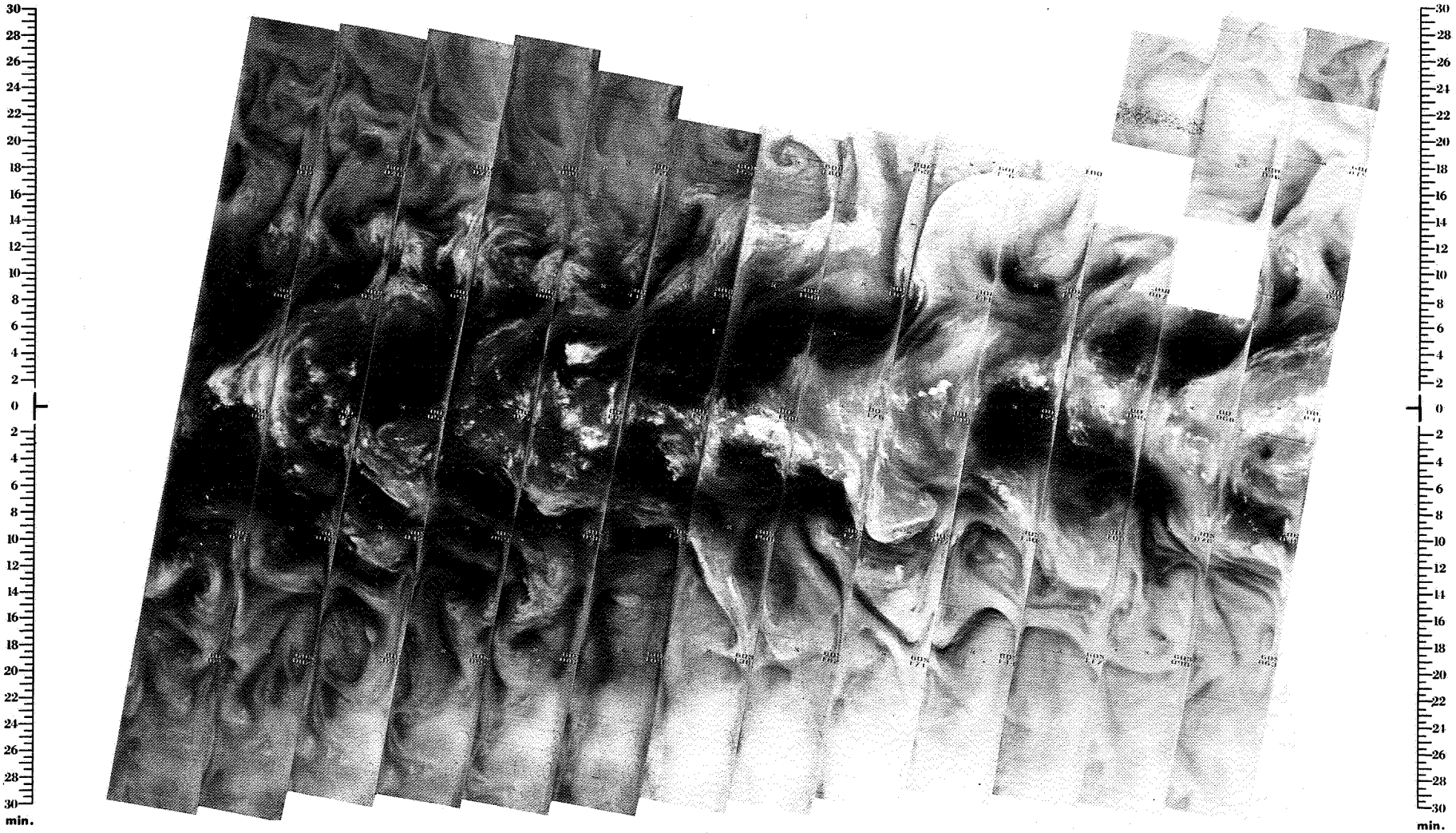
6.7 μm

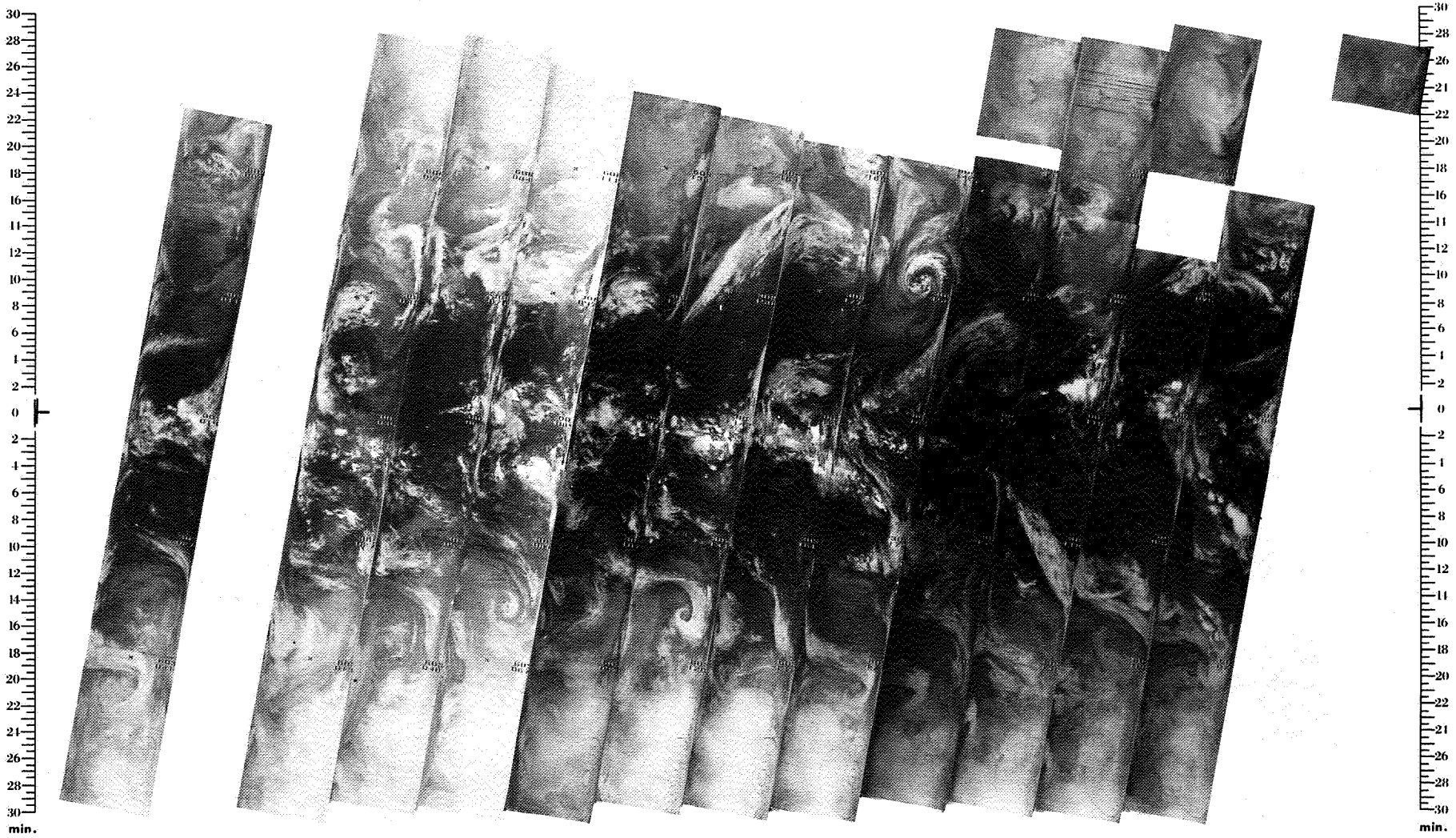


1539 1538 1537 1536 1535 1534 1533 1532 1531 1530 1529 1528 1527

4 APRIL 1973

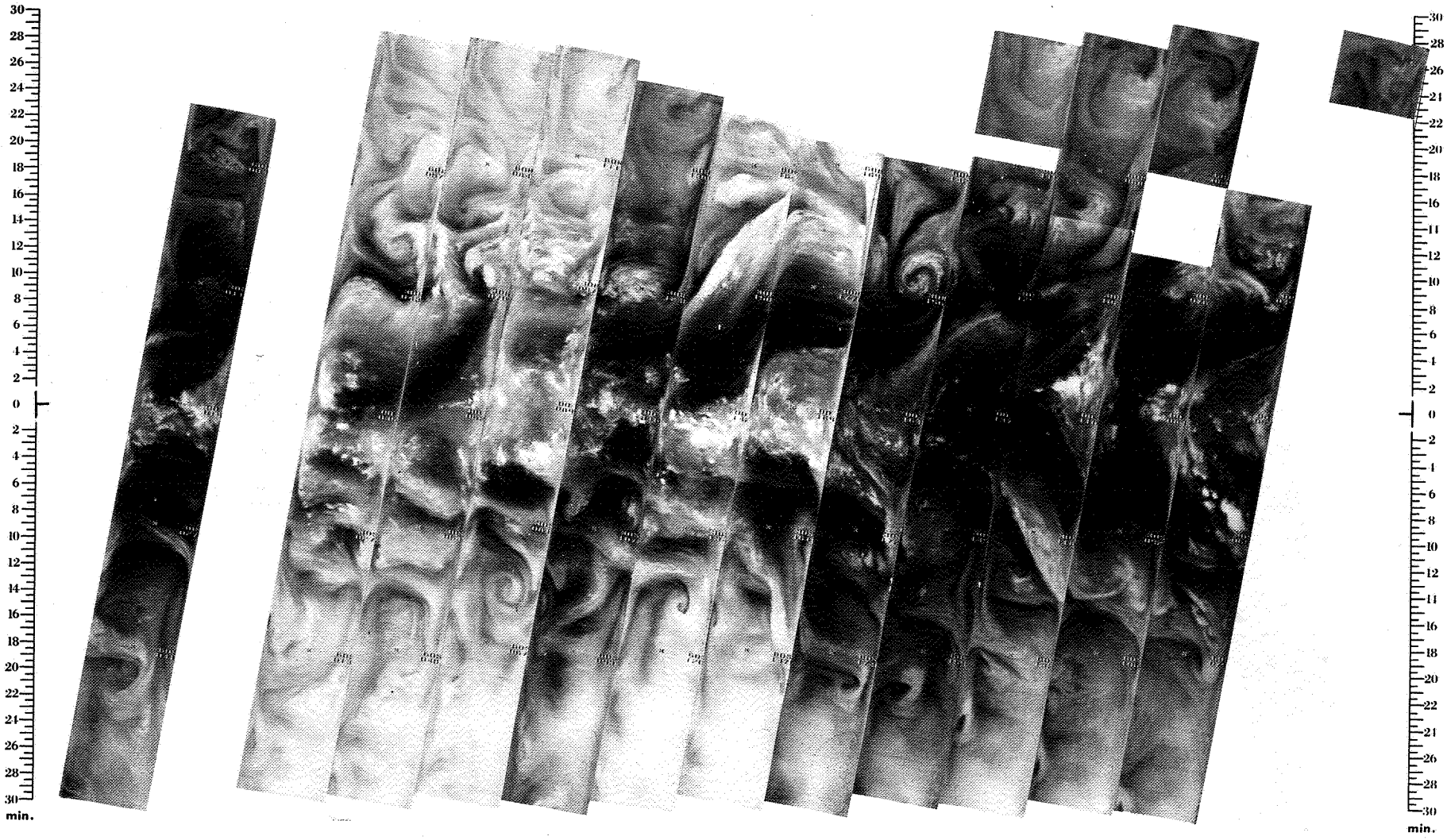
11.5μm


min.
min.
1539 1538 1537 1536 1535 1534 1533 1532 1531 1530 1529 1528 1527
4 APRIL 1973
6.7μm



5 APRIL 1973

11.5 μm



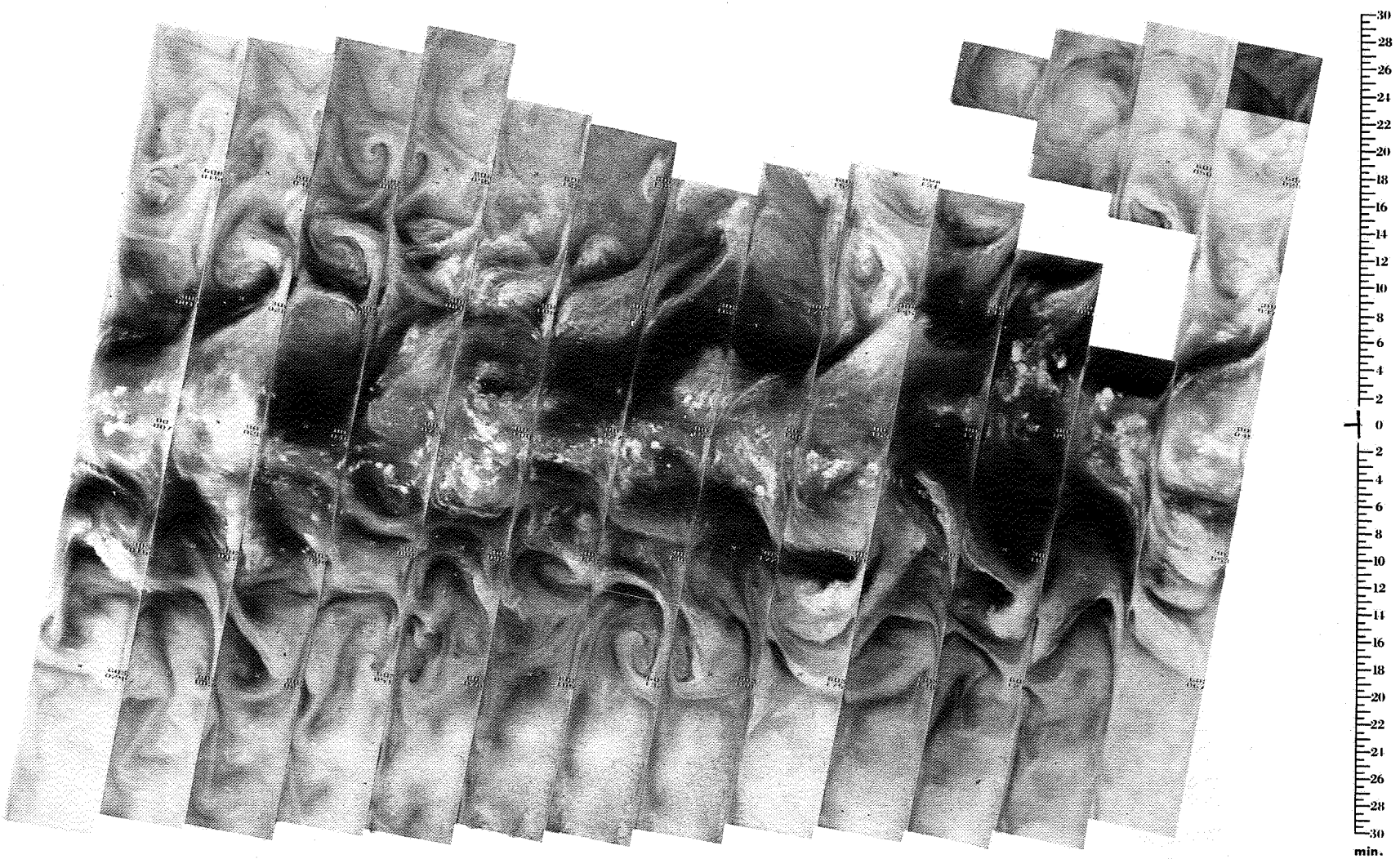
5 APRIL 1973

6.7 μm



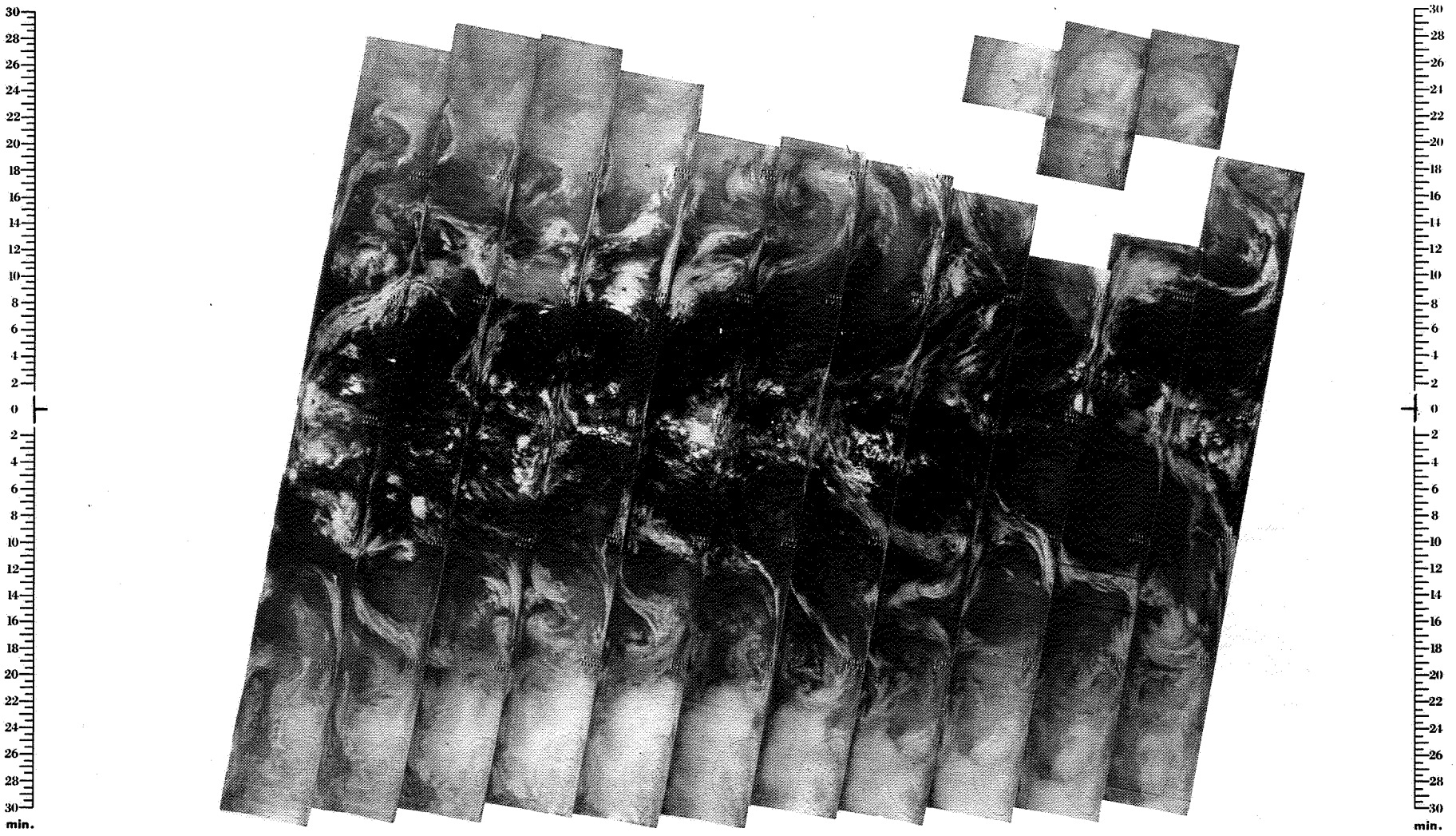
6 APRIL 1973

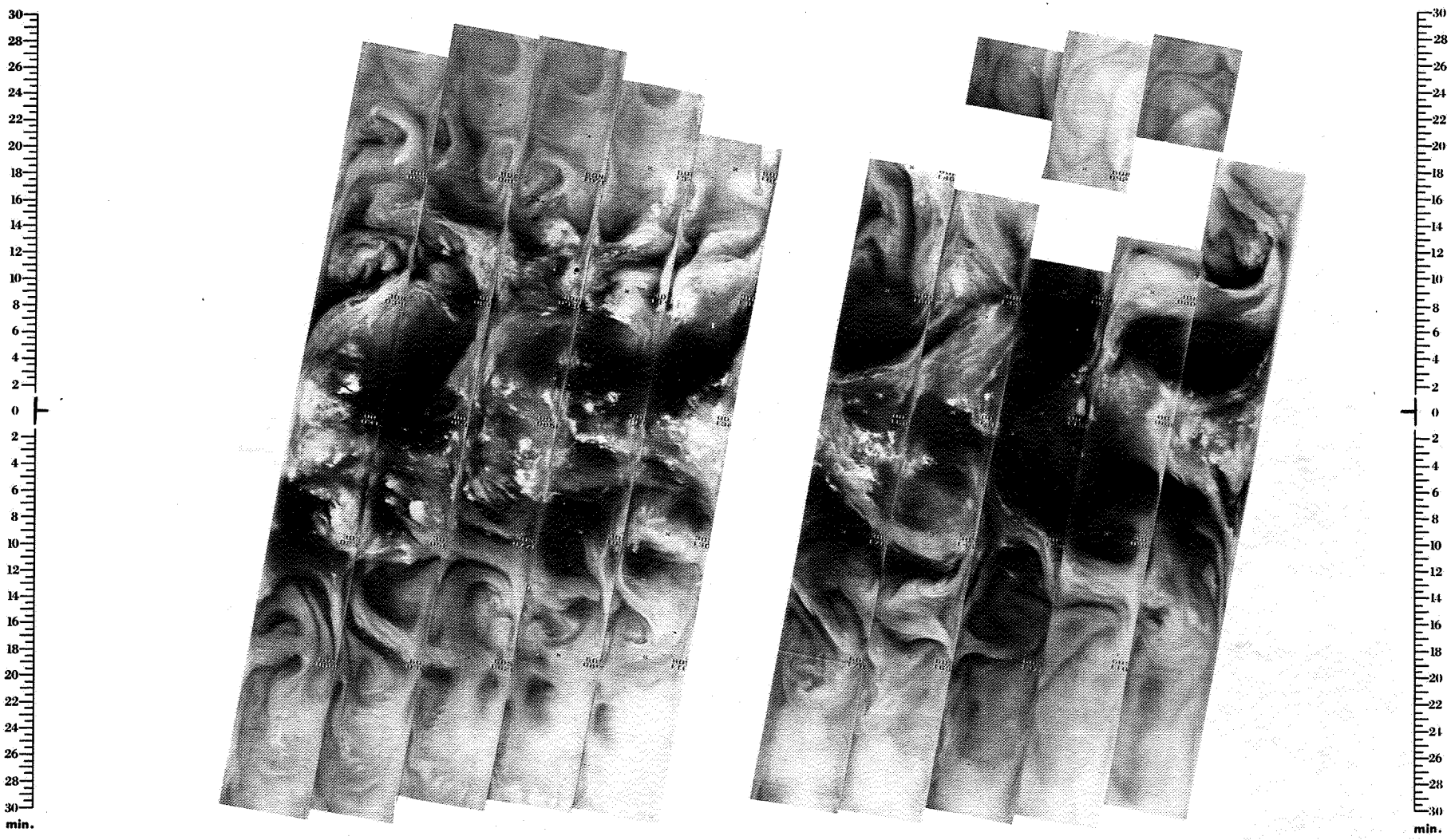
11.5 μm



6 APRIL 1973

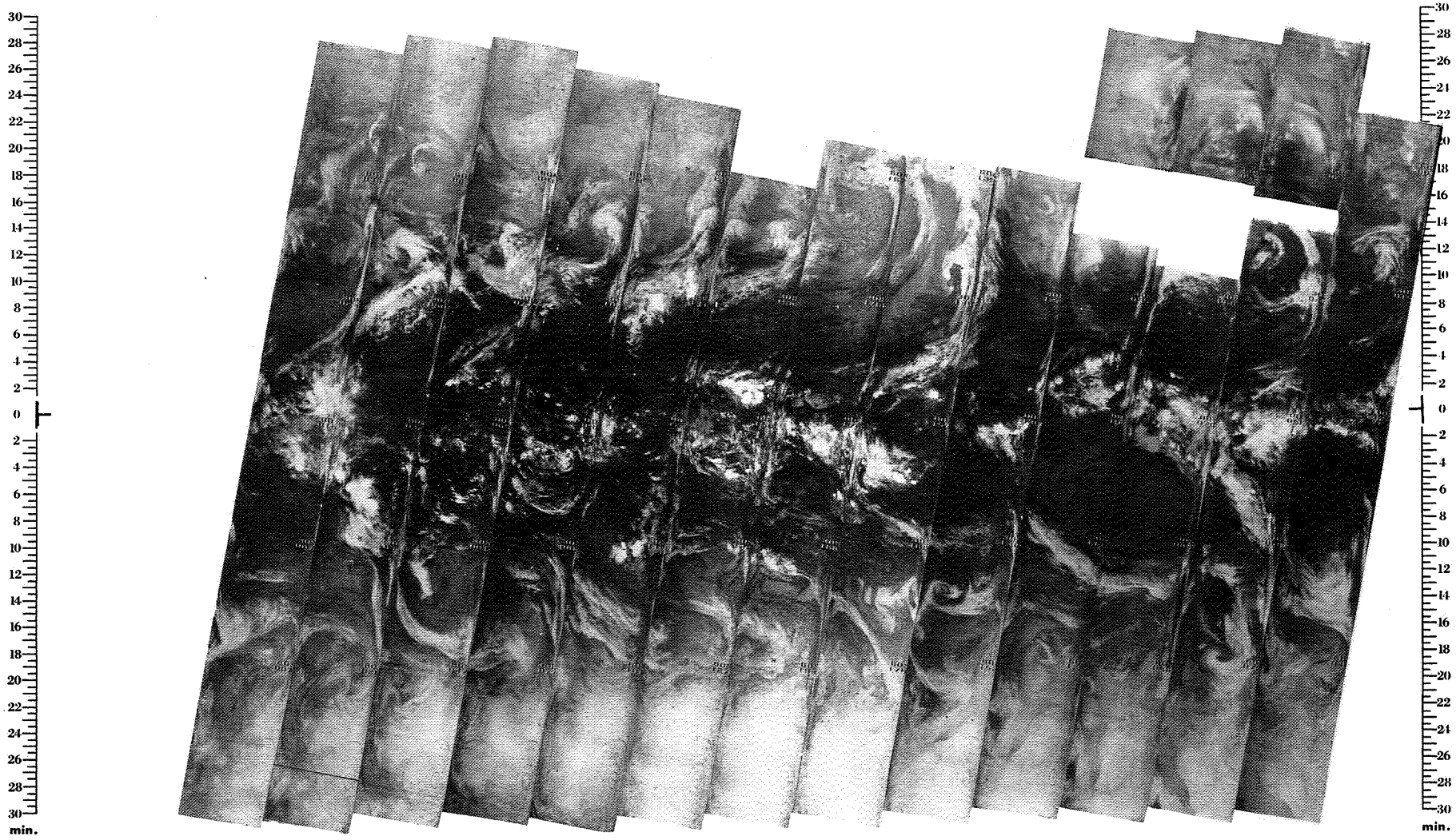
6.7 μm


min.
min.
1579 1578 1577 1576 1575 1574 1573 1572 1571 1570 1569 1568 1567
7 APRIL 1973
11.5 μm



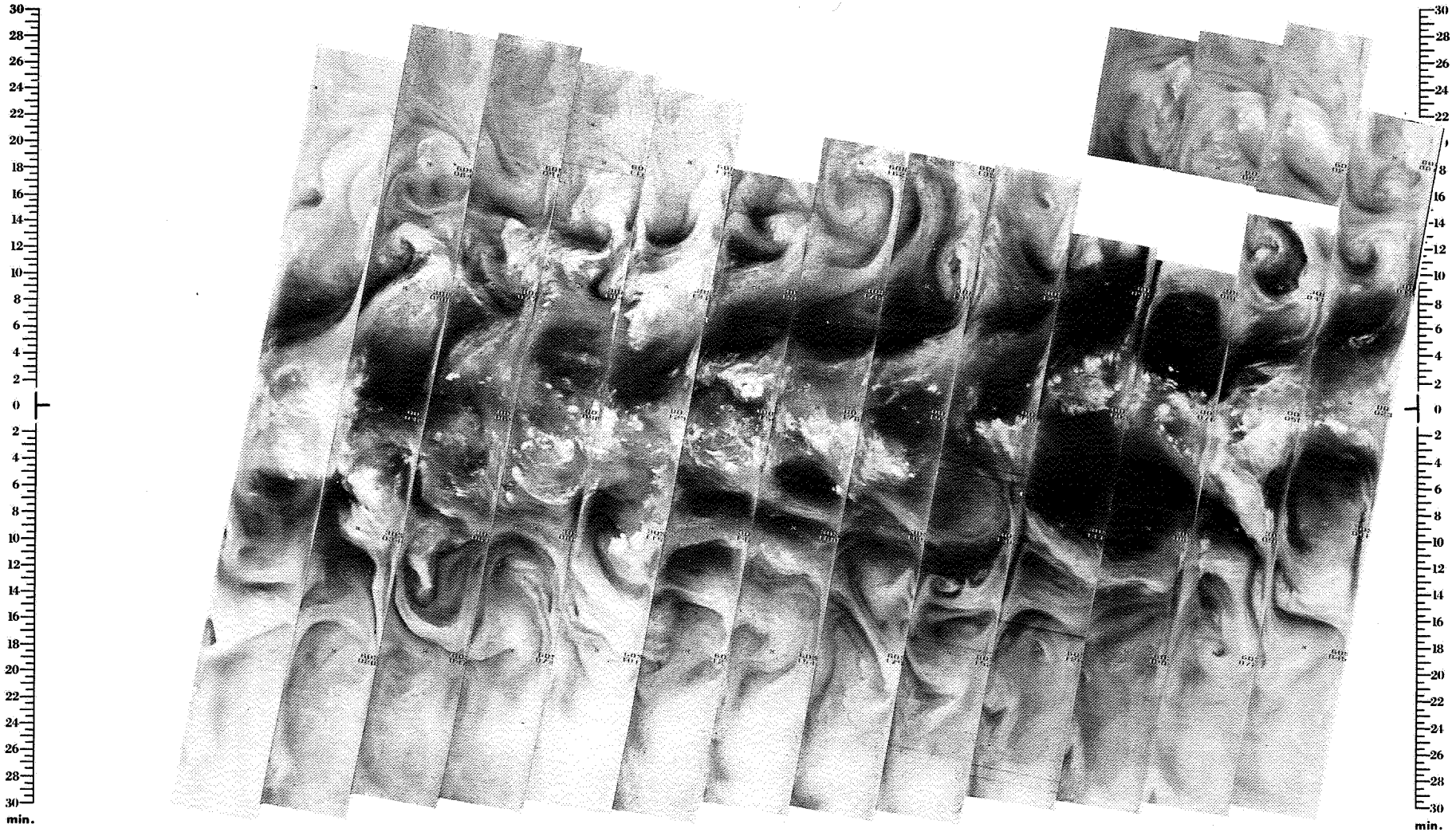
7 APRIL 1973

6.7 μm



8 APRIL 1973

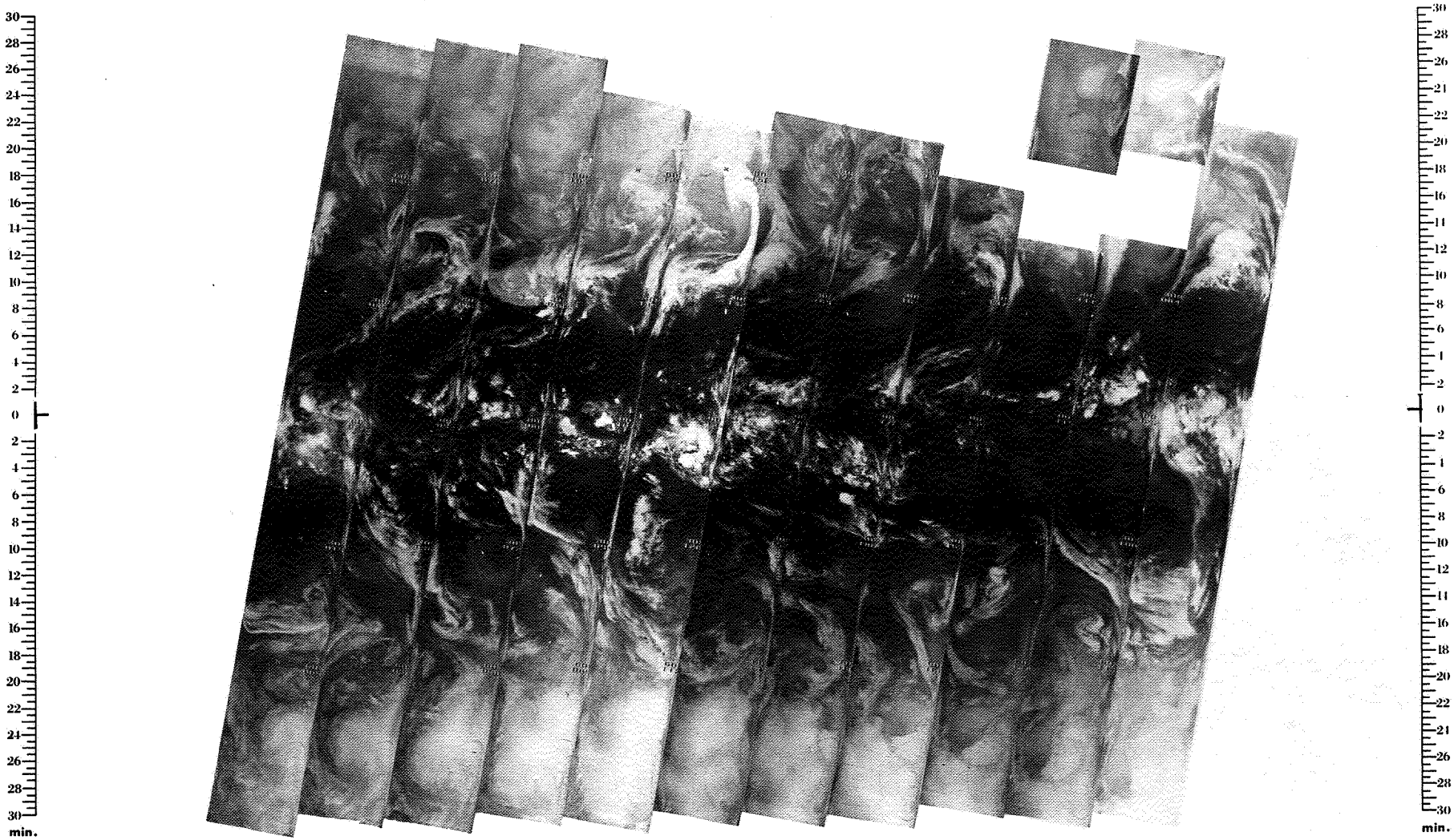
11.5 μm



1593 1592 1591 1590 1589 1588 1587 1586 1585 1584 1583 1582 1581 1580

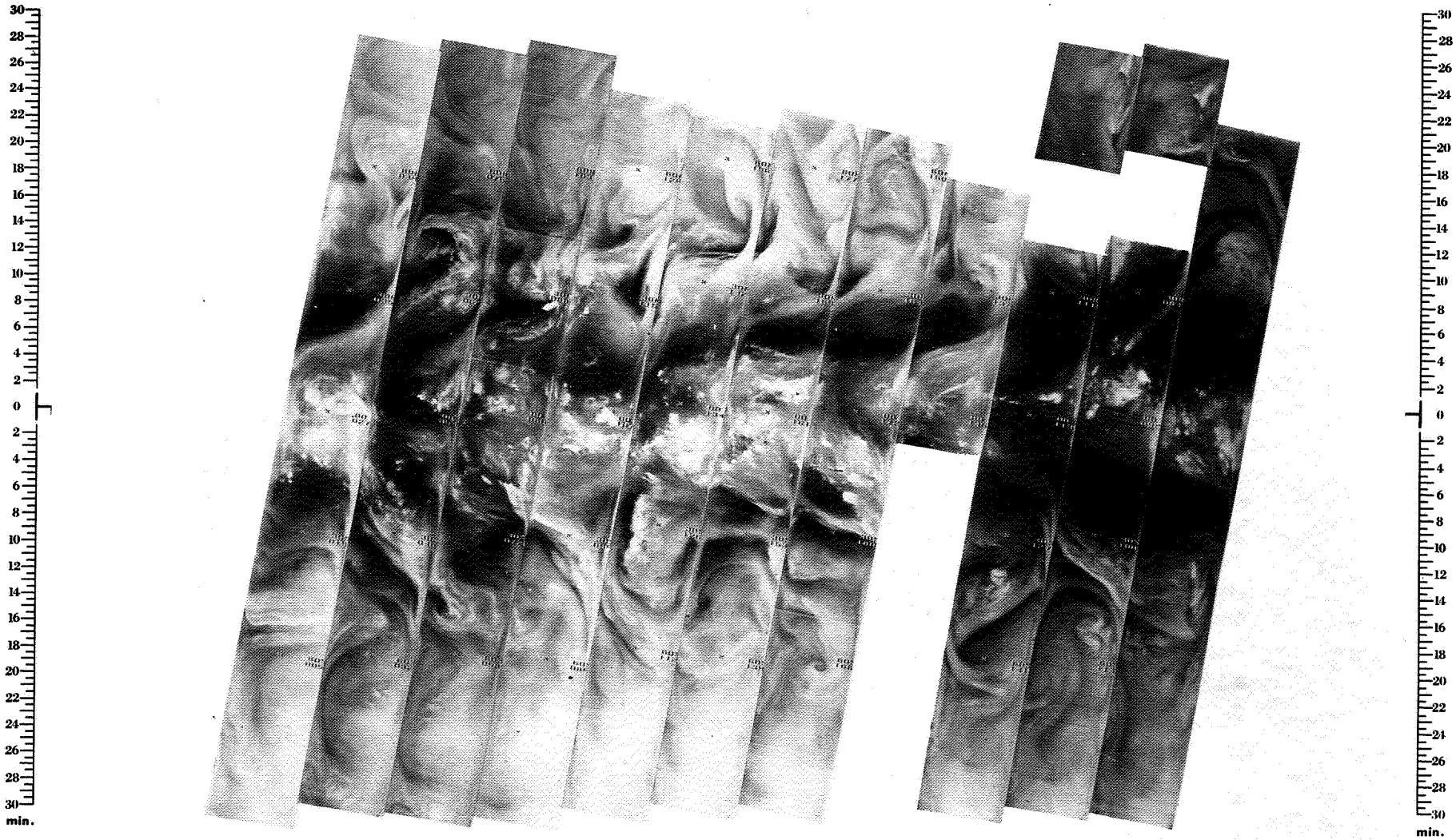
8 APRIL 1973

6.7 μm



9 APRIL 1973

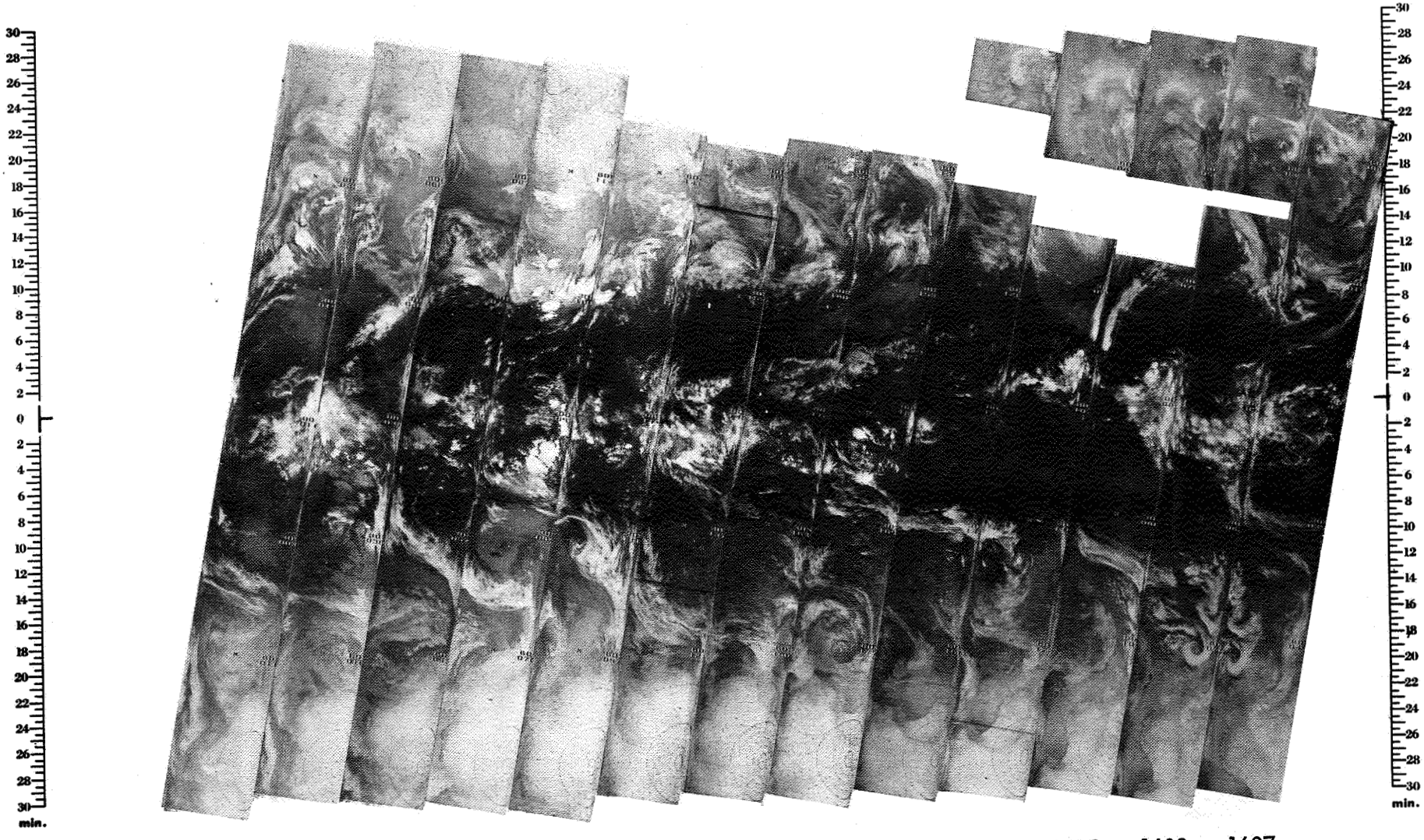
11.5 μm

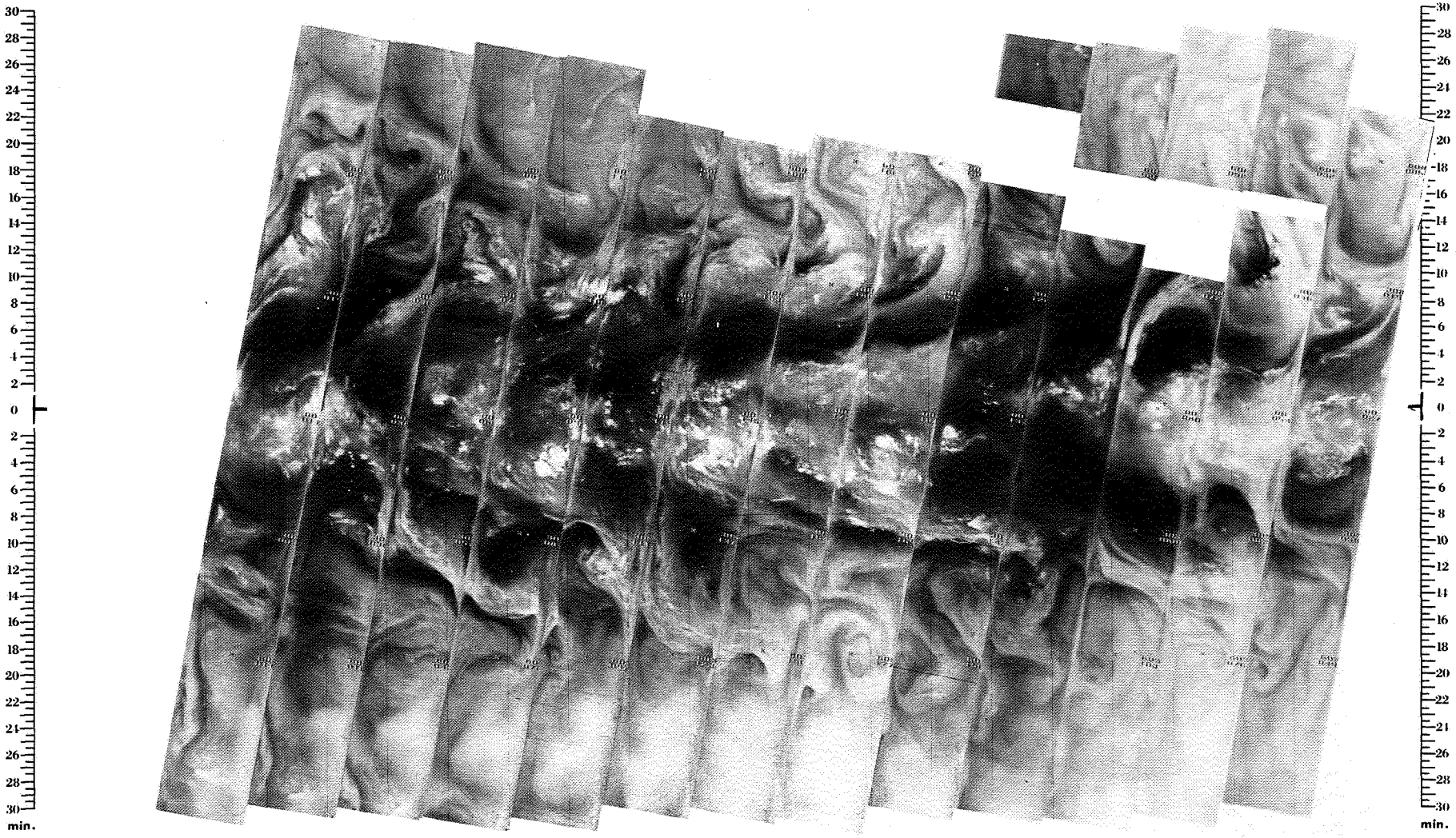


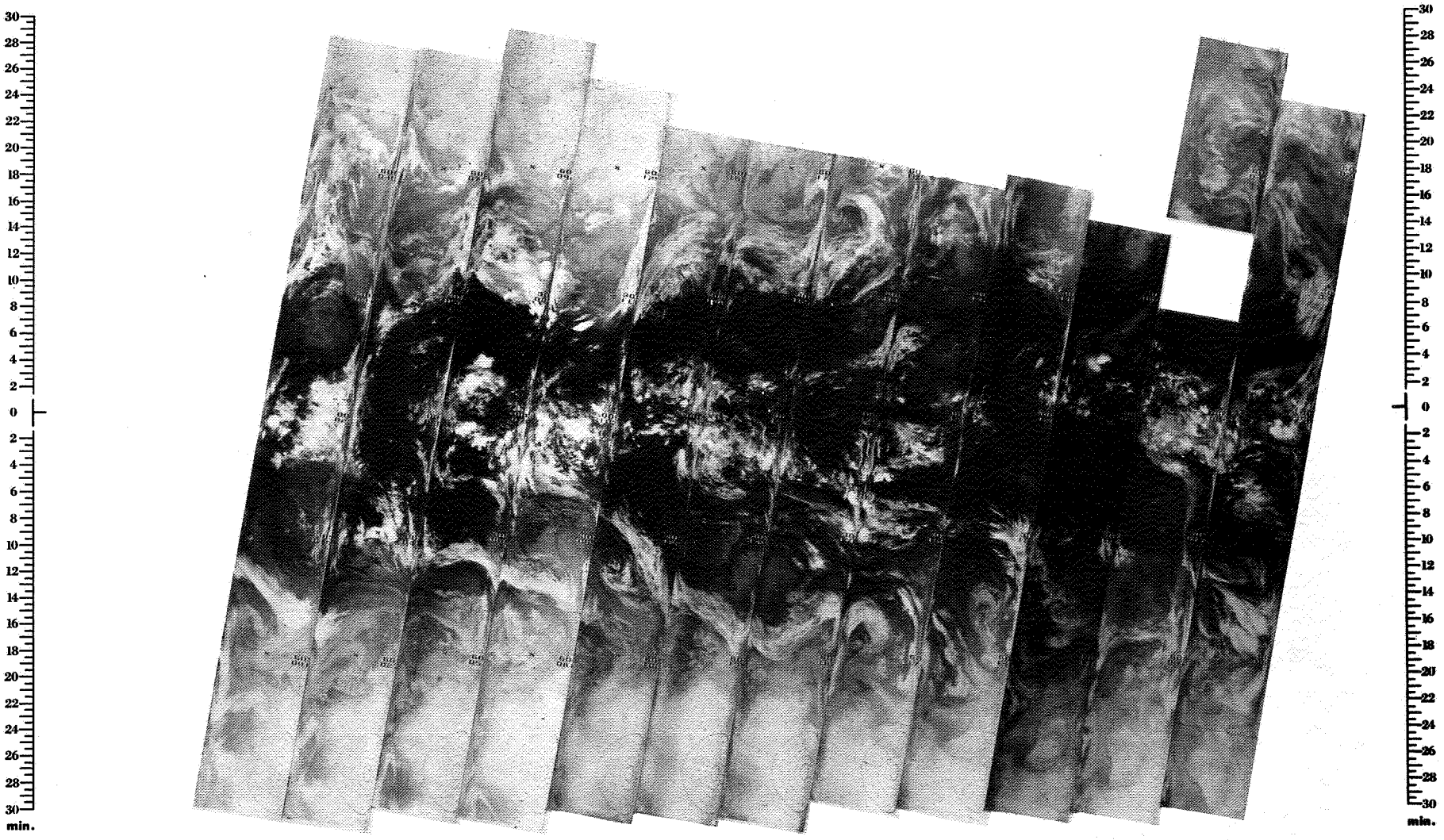
1606 1605 1604 1603 1602 1601 1600 1599 1598 1597 1596 1595 1594

9 APRIL 1973

6.7 μm

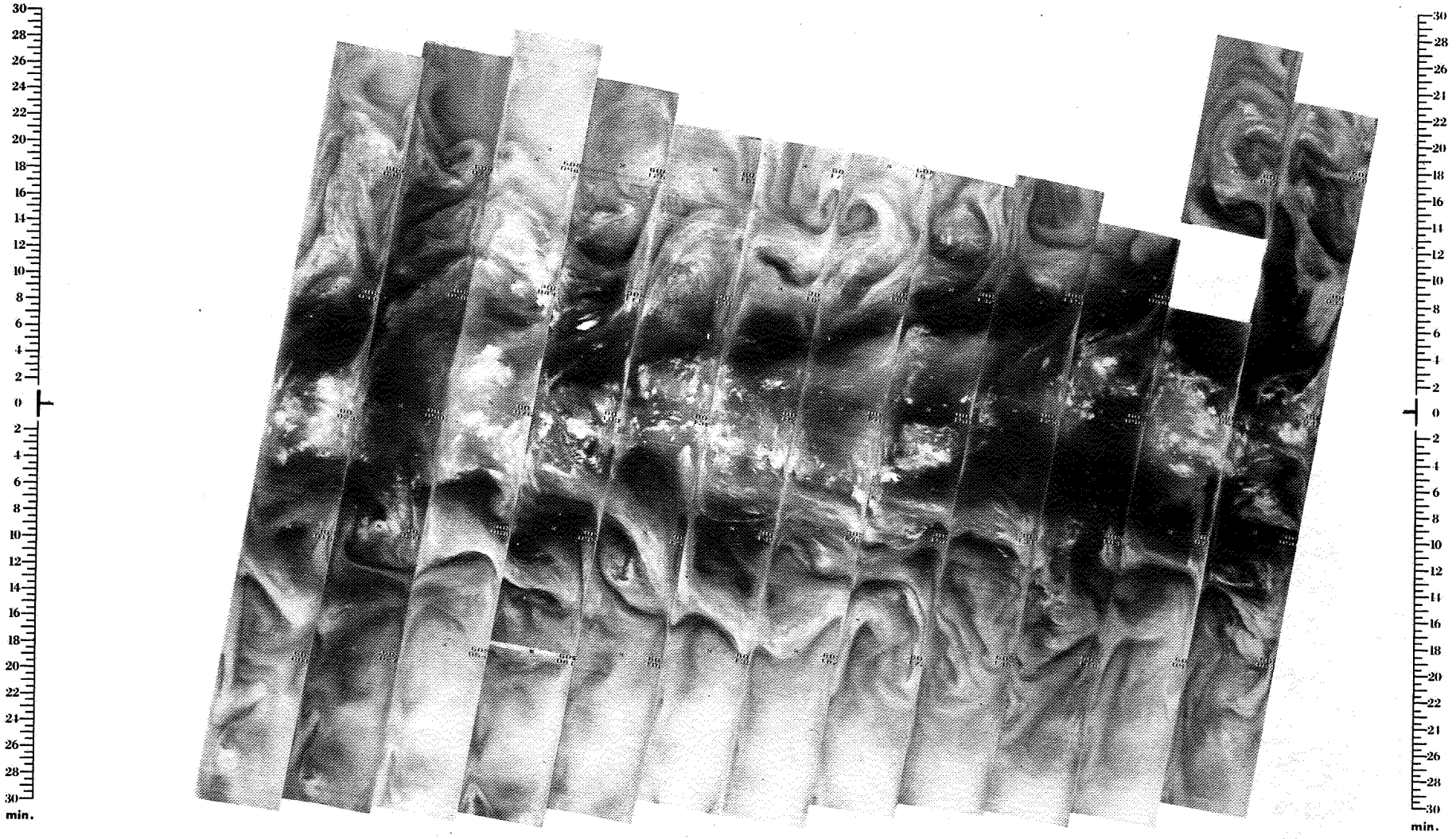

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min.
1620 1619 1618 1617 1616 1615 1614 1613 1612 1611 1610 1609 1608 1607
10 APRIL 1973
11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1620 1619 1618 1617 1616 1615 1614 1613 1612 1611 1610 1609 1608 1607
10 APRIL 1973
6.7 μm



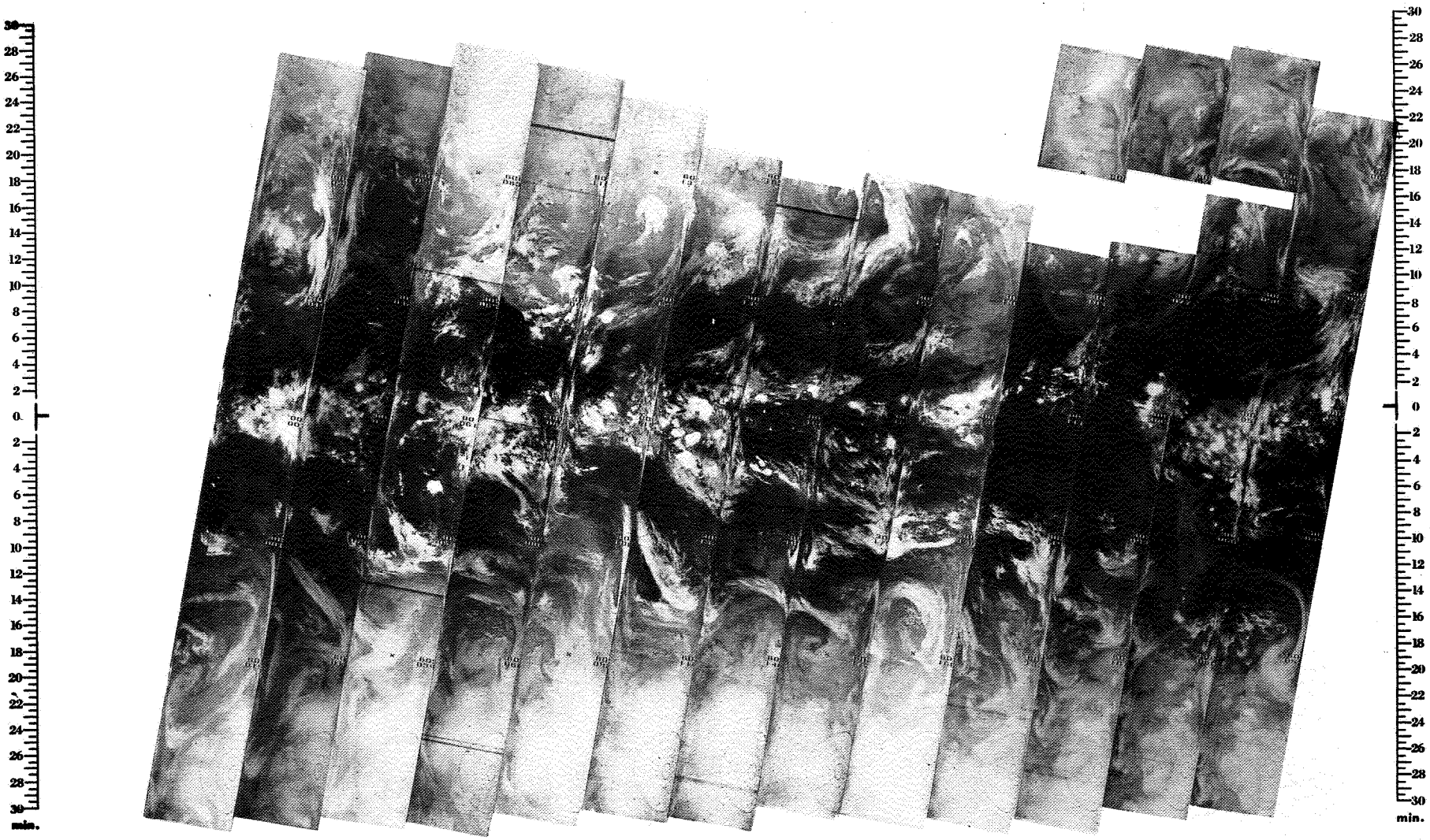
11 APRIL 1973

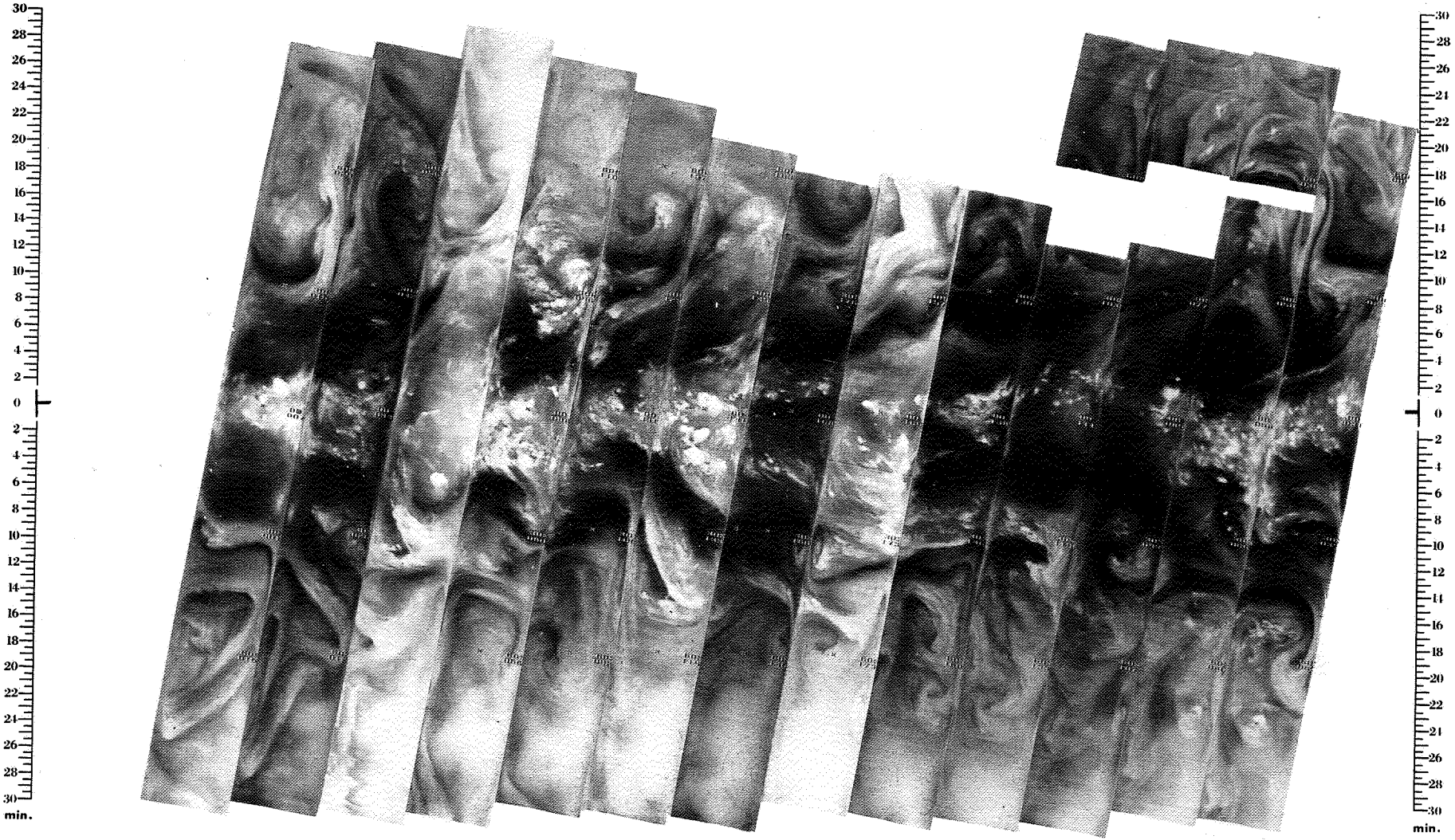
11.5 μm

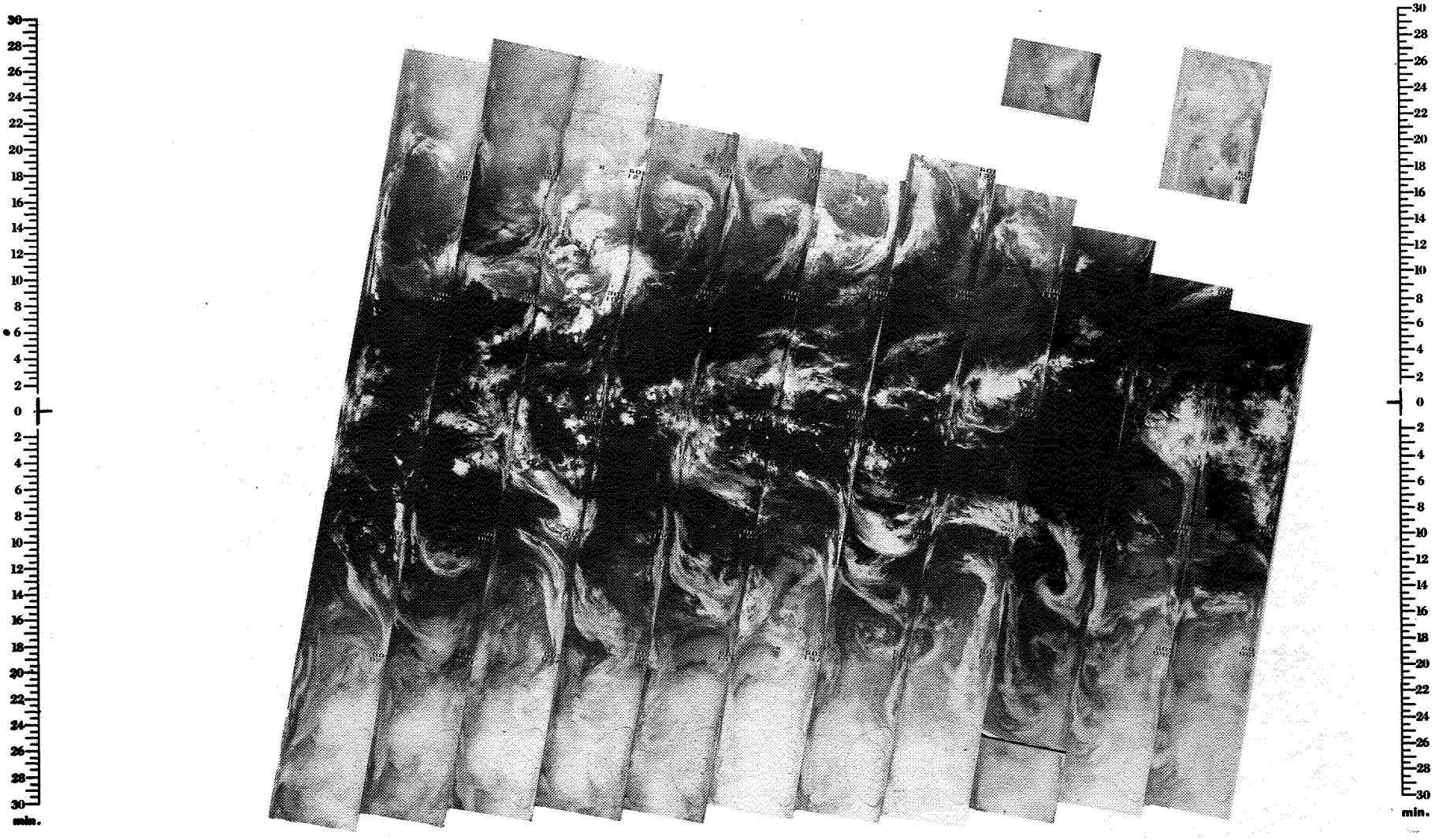


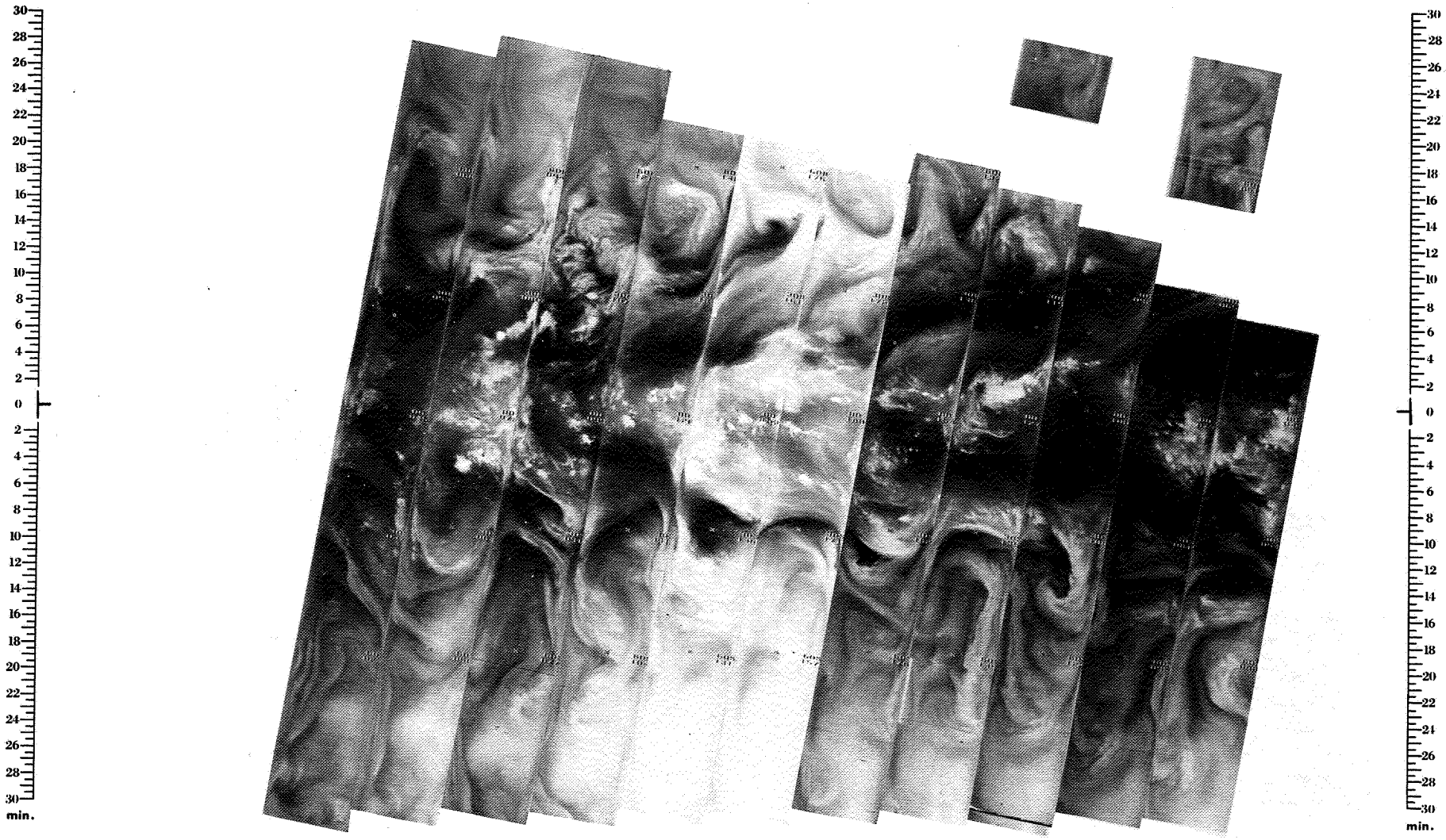
11 APRIL 1973

6.7 μm


1647
1646
1645
1644
1643
1642
1641
1640
1639
1638
1637
1636
1635
1634
12 APRIL 1973
11.5 μm
min.
min.

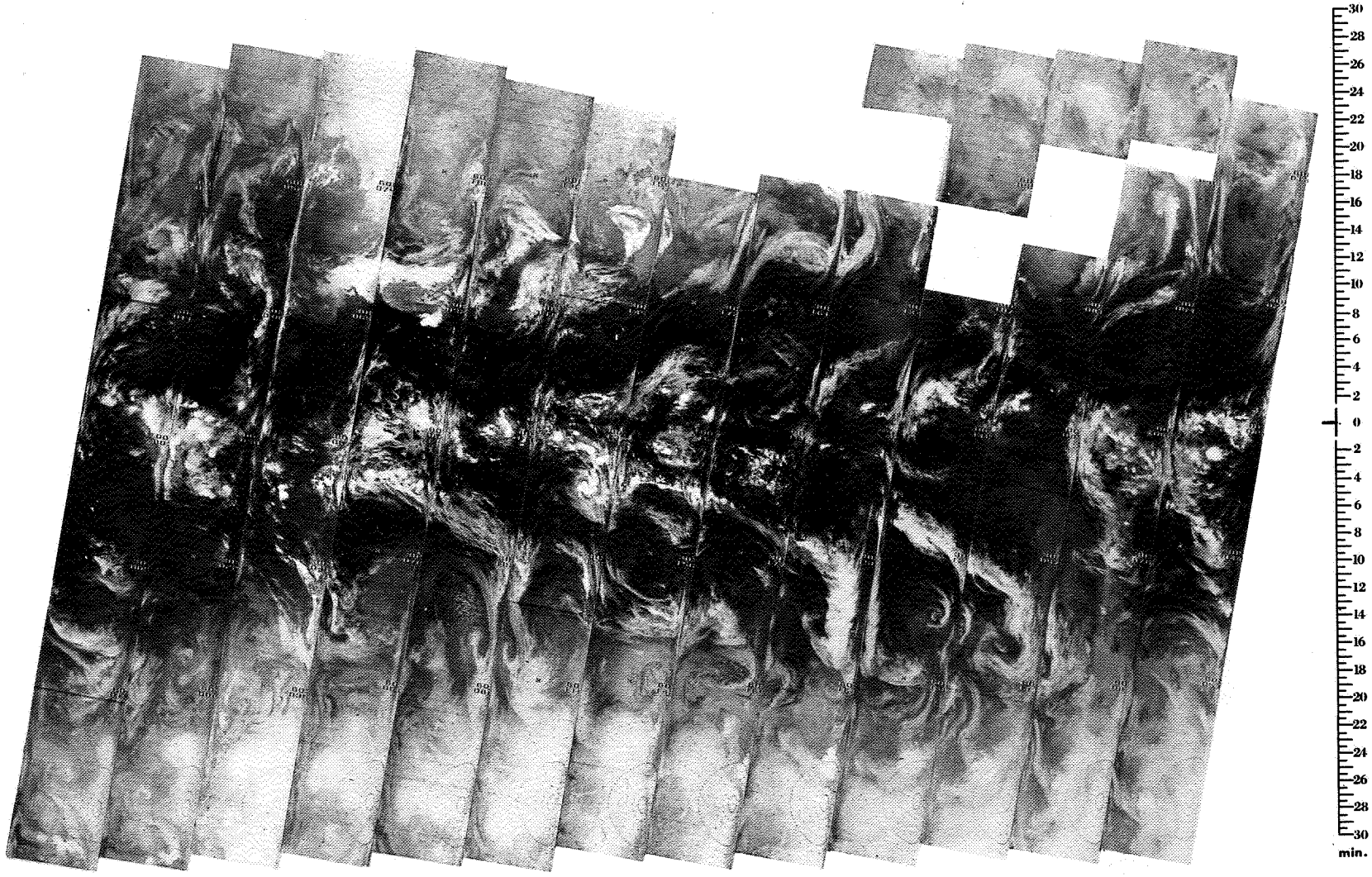

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min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1647 1646 1645 1644 1643 1642 1641 1640 1639 1638 1637 1636 1635 1634
12 APRIL 1973
6.7 μm

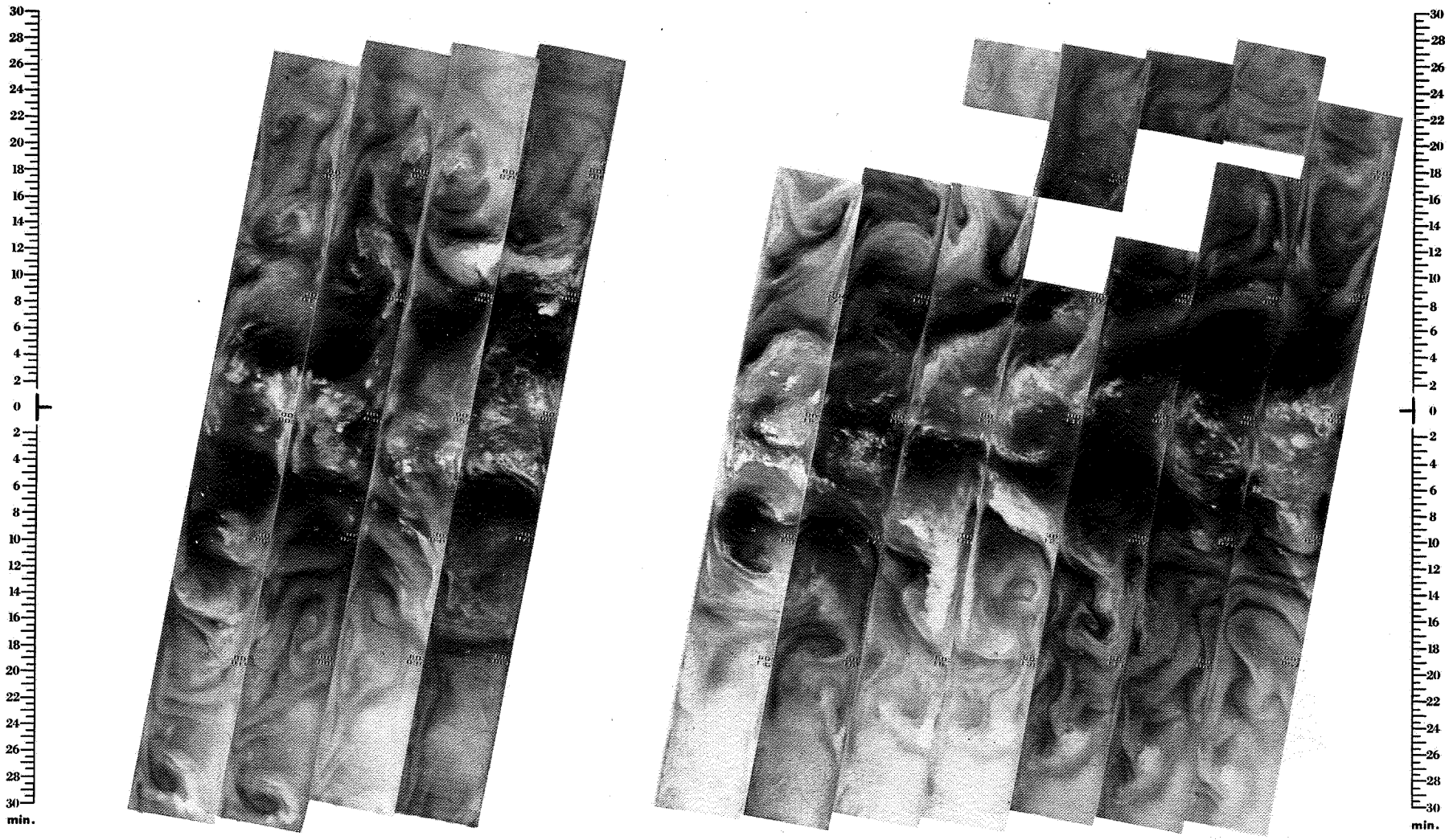

1660
1659
1658
1657
1656
1655
1654
1653
1652
1651
1650
1649
1648
13 APRIL 1973
11.5 μm
min.



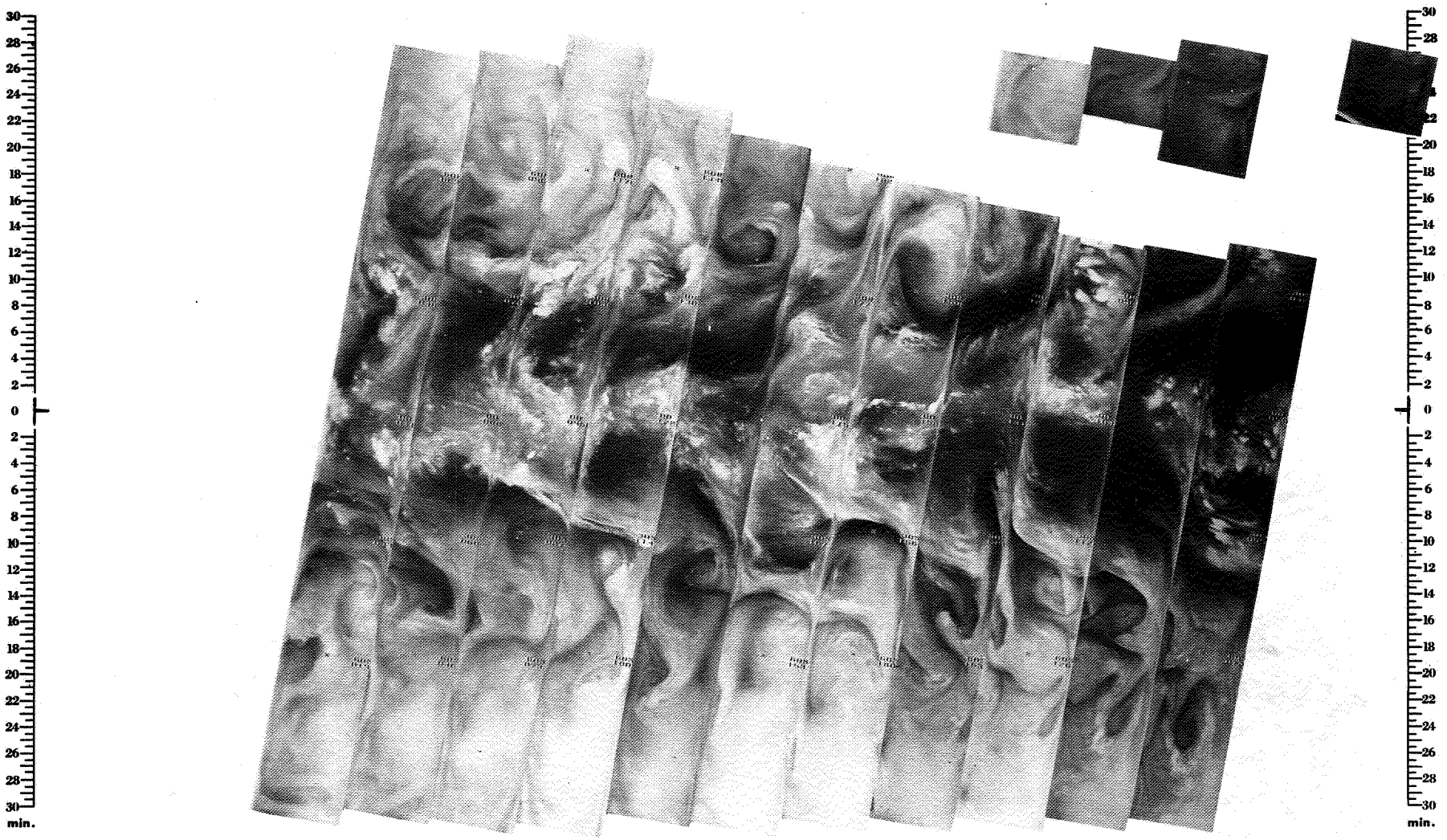
13 APRIL 1973

6.7 μm


1673 1672 1671 1670 1669 1668 1667 1666 1665 1664 1663 1662 1661
14 APRIL 1973
11.5 μm
min.
min.


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1673 1672 1671 1670 1669 1668 1667 1666 1665 1664 1663 1662 1661
14 APRIL 1973
6.7 μm

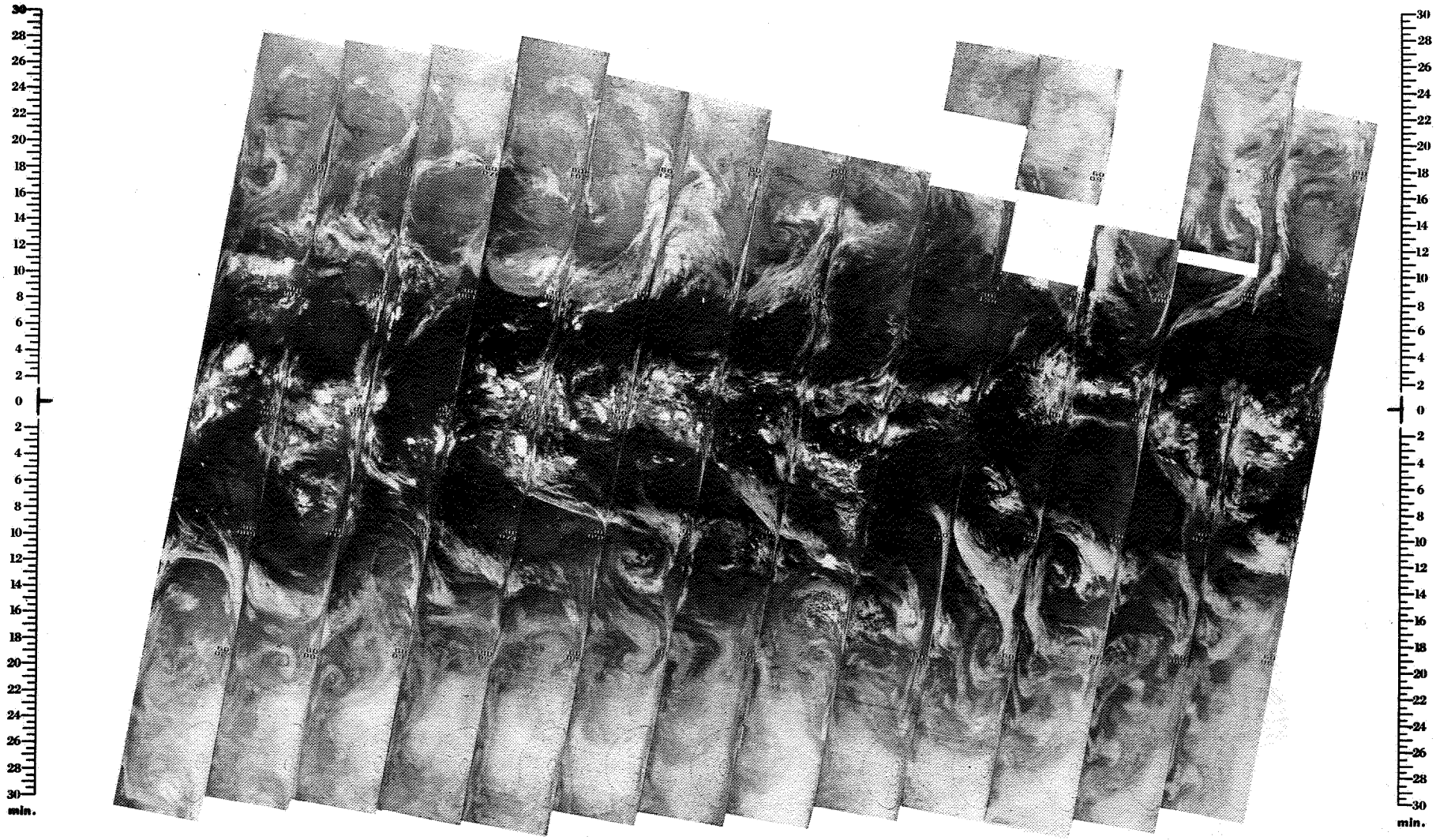

min.
min.
1687 1686 1685 1684 1683 1682 1681 1680 1679 1678 1677 1676 1675 1674
15 APRIL 1973
11.5 μm

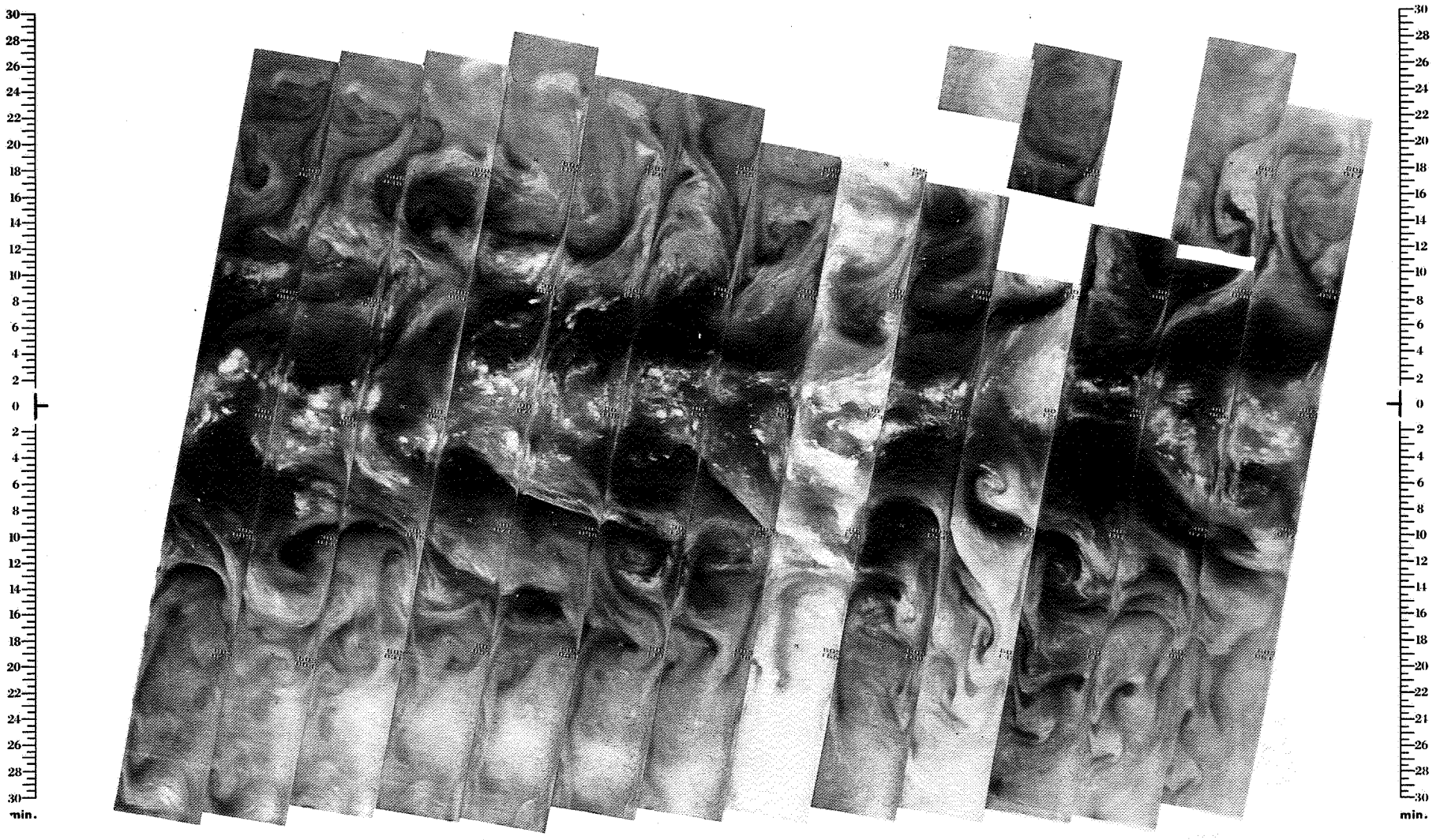


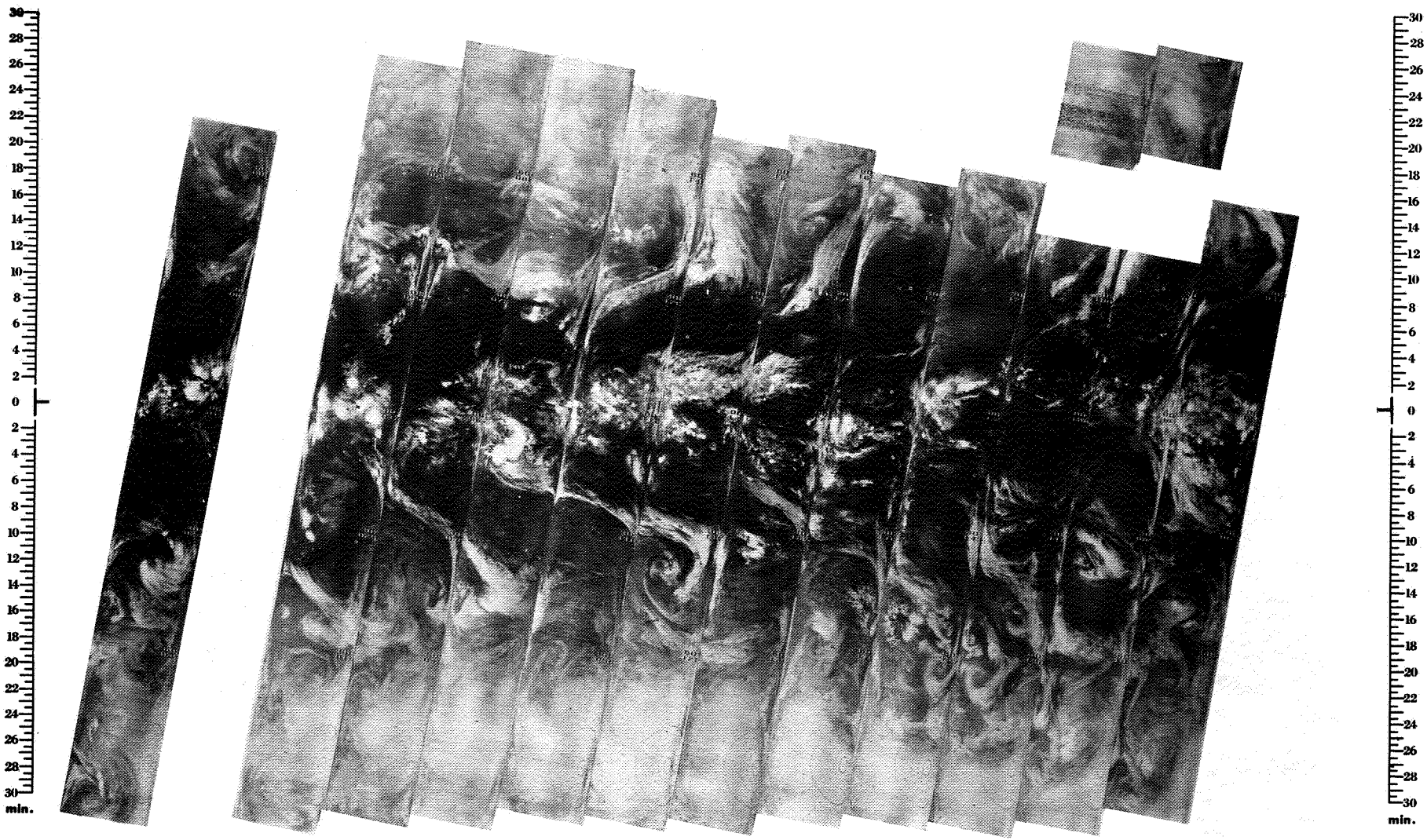
1687 1686 1685 1684 1683 1682 1681 1680 1679 1678 1677 1676 1675 1674

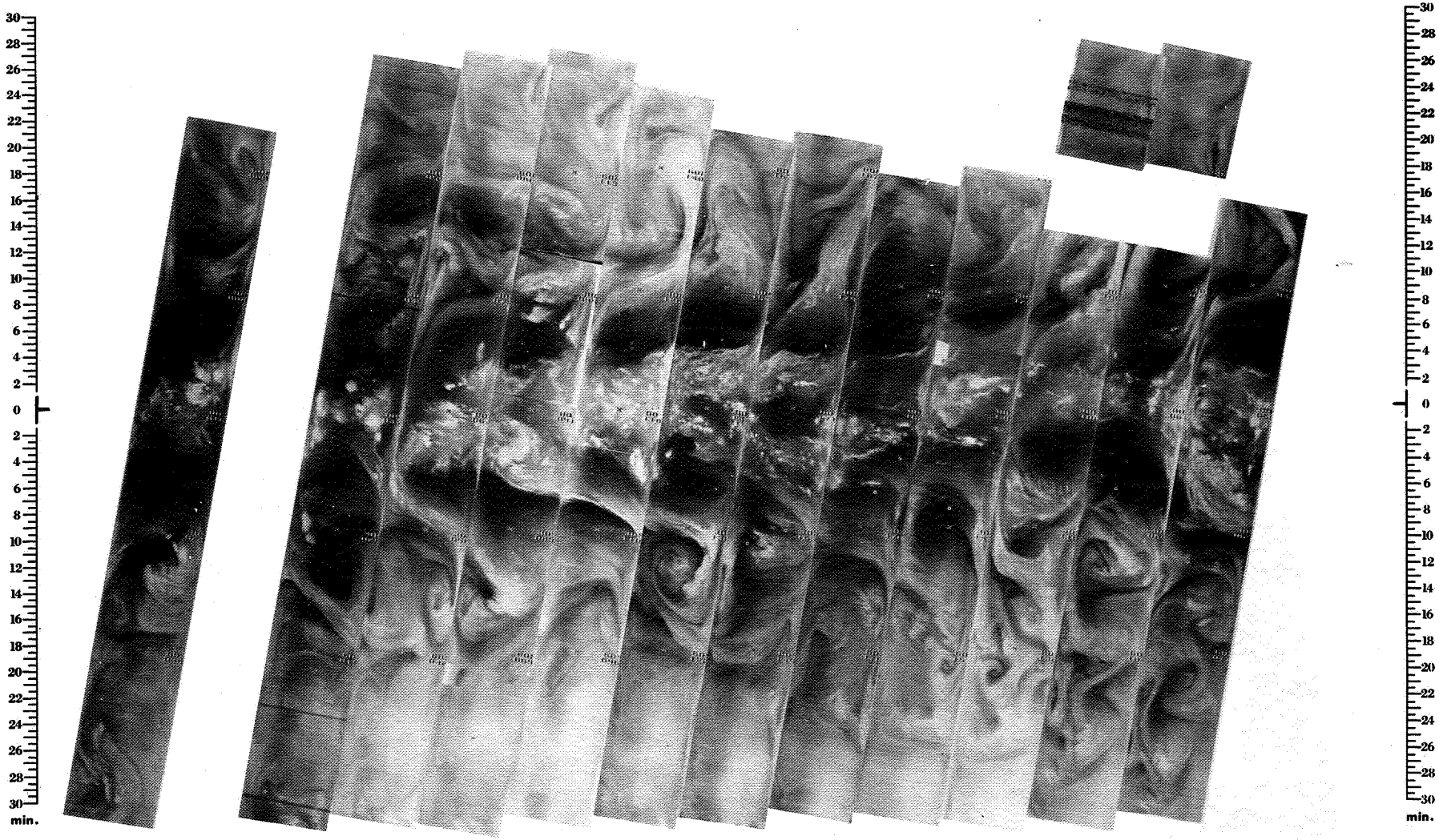
15 APRIL 1973

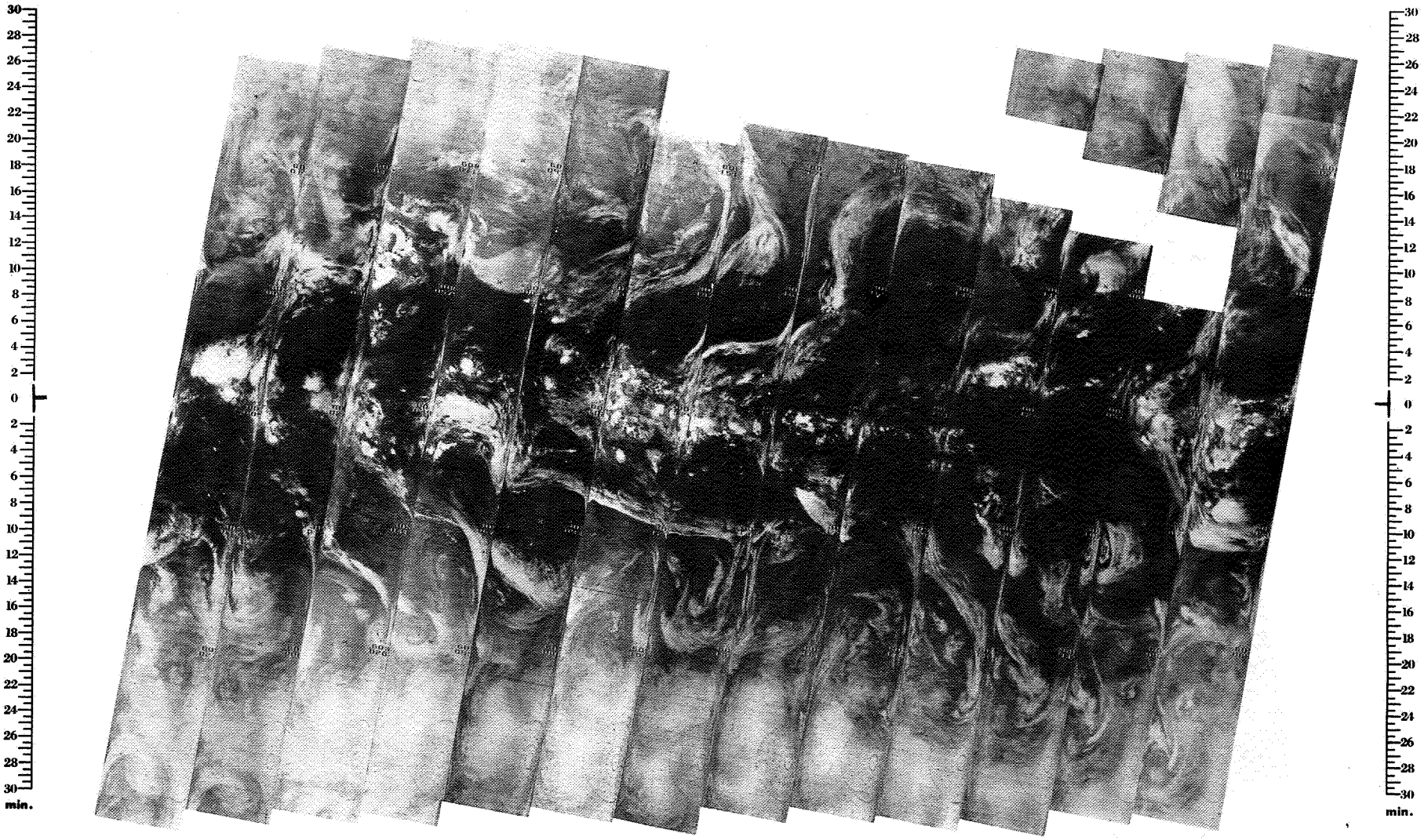
6.7 μm

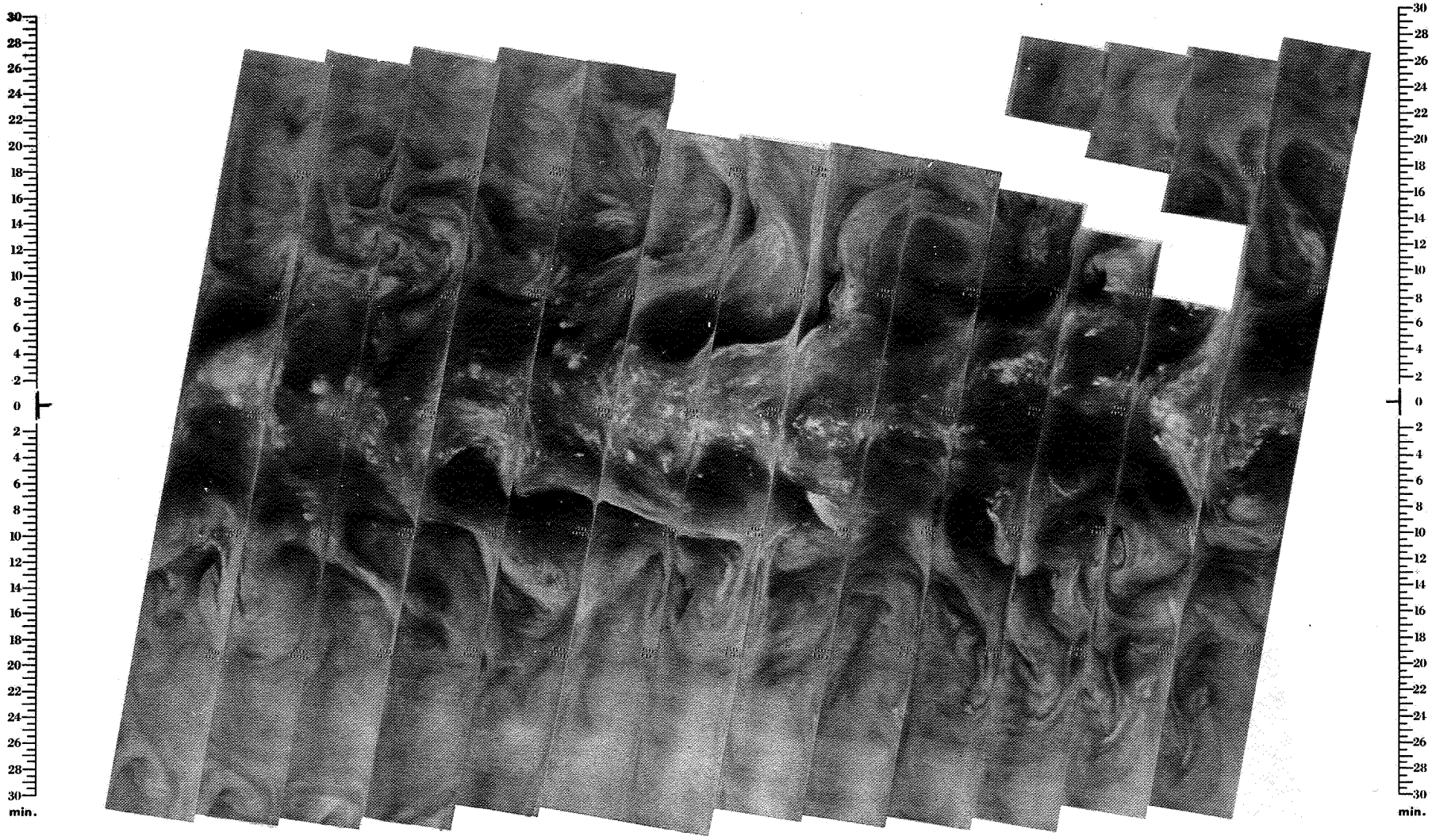

min.
min.
1700 1699 1698 1697 1696 1695 1694 1693 1692 1691 1690 1689 1688
16 APRIL 1973
11.5 μm

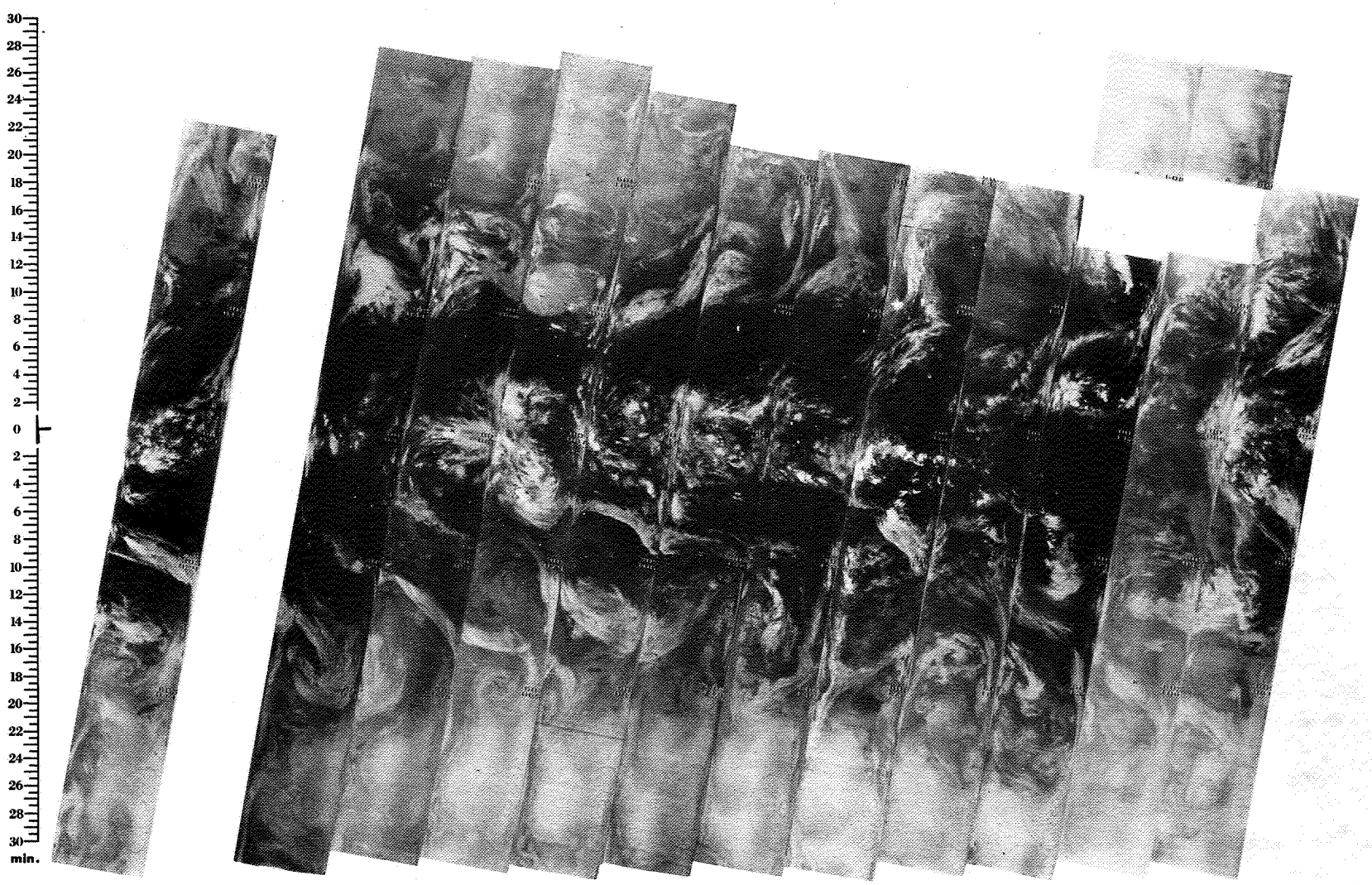

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min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1700 1699 1698 1697 1696 1695 1694 1693 1692 1691 1690 1689 1688
16 APRIL 1973
6.7 μm

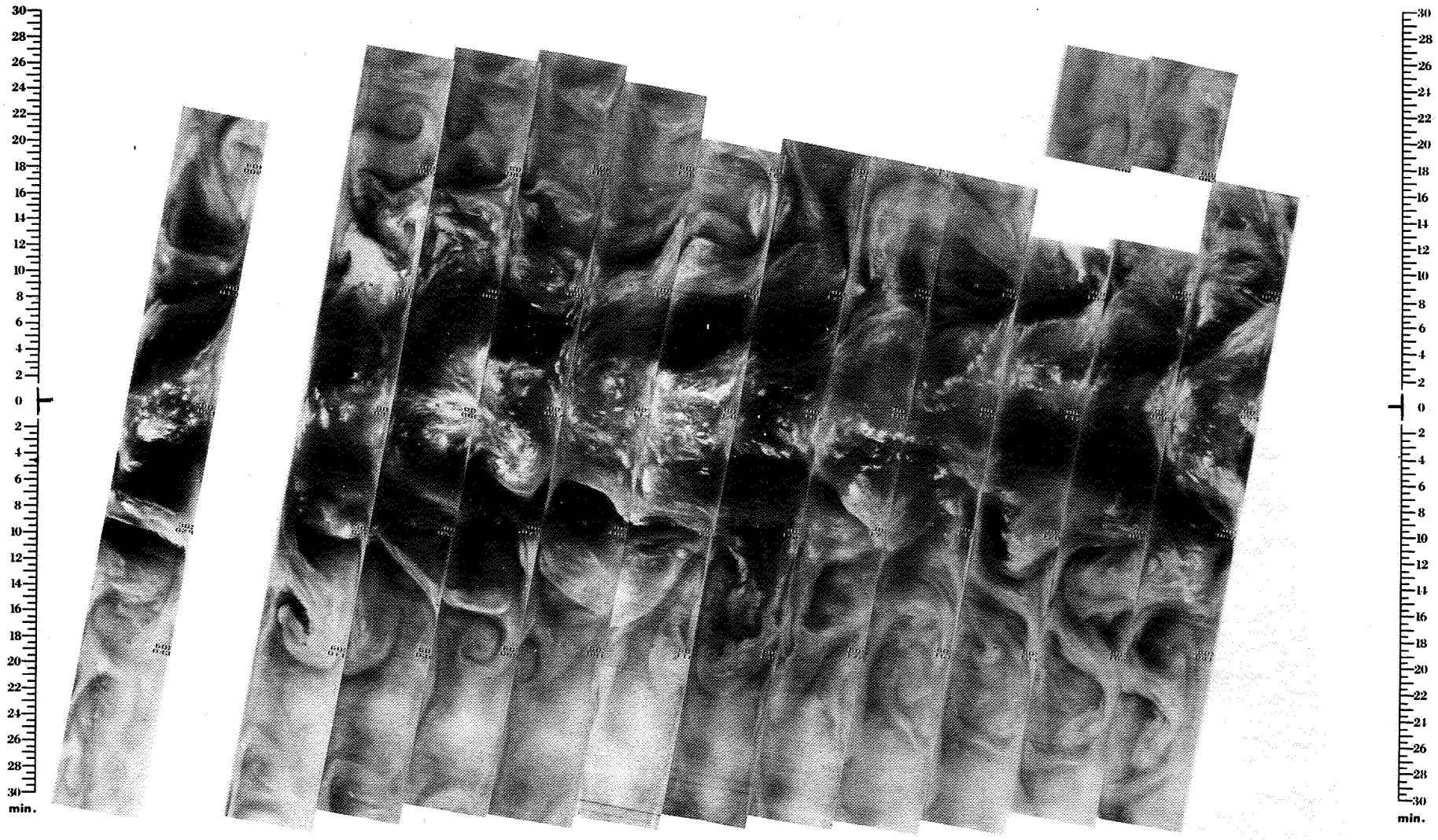

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1714 1713 1712 1711 1710 1709 1708 1707 1706 1705 1704 1703 1702 1701
17 APRIL 1973
11.5 μm

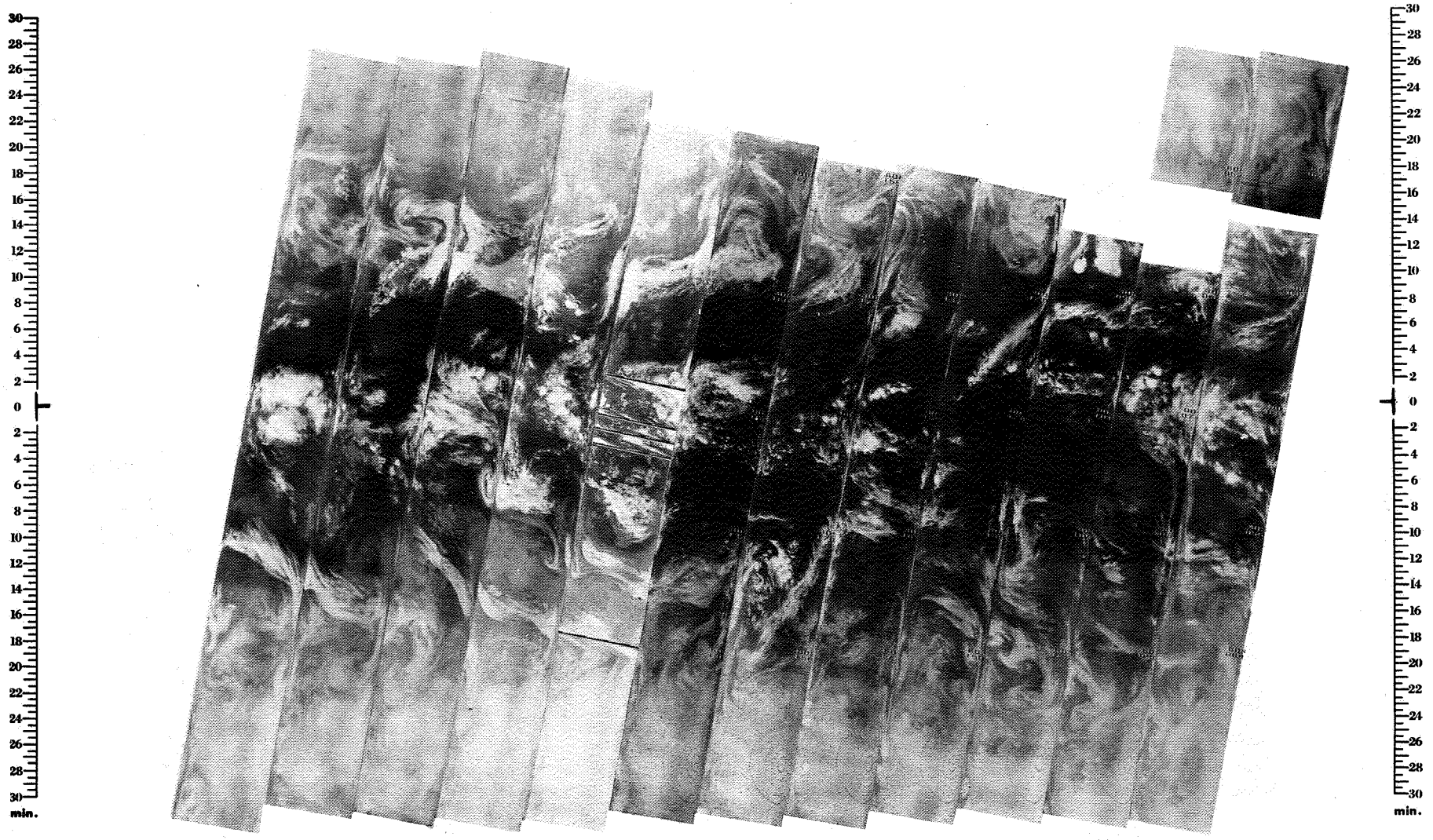

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1714 1713 1712 1711 1710 1709 1708 1707 1706 1705 1704 1703 1702 1701
17 APRIL 1973
6.7 μm

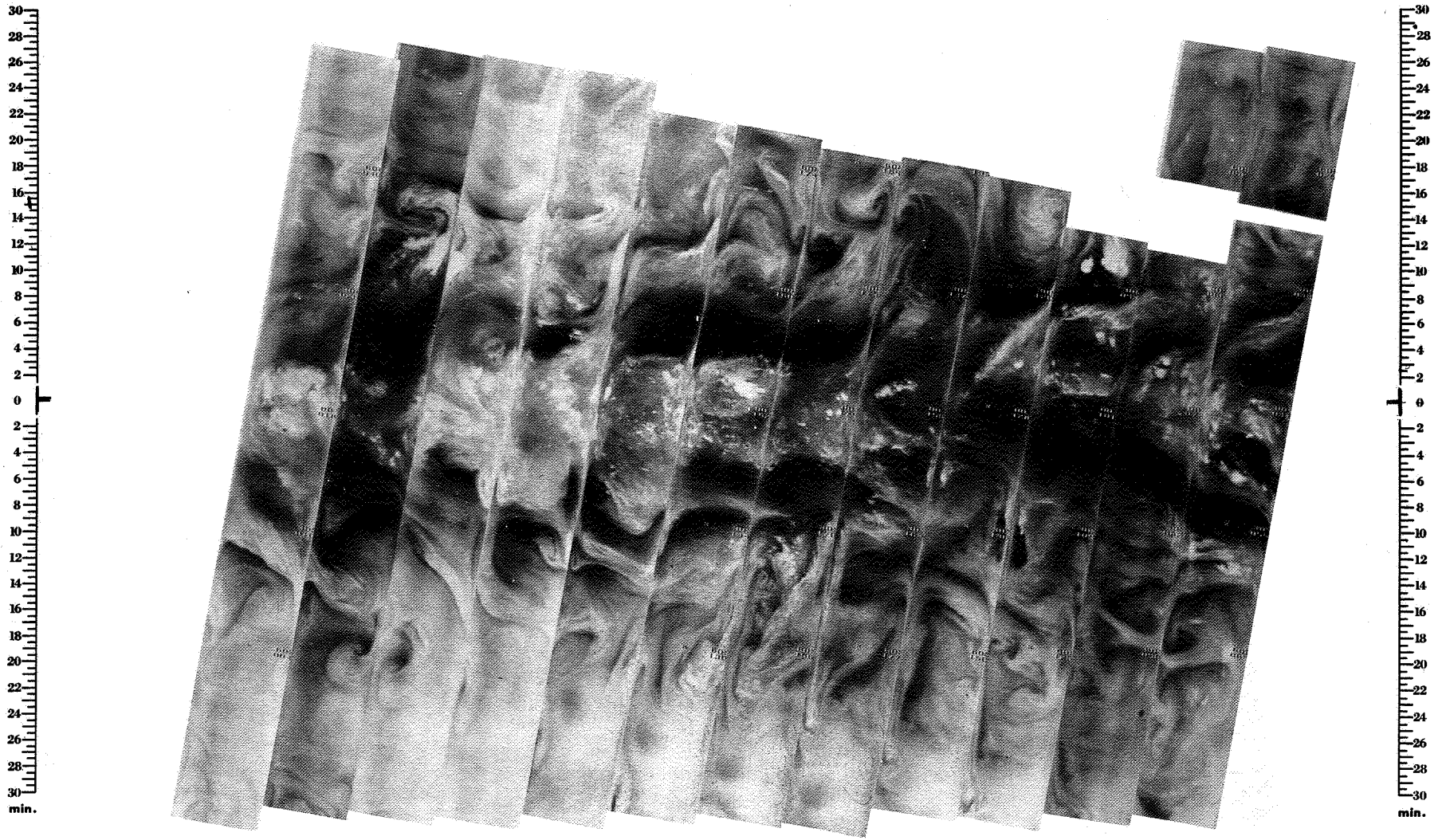

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1727 1726 1725 1724 1723 1722 1721 1720 1719 1718 1717 1716 1715
18 APRIL 1973
11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1727 1726 1725 1724 1723 1722 1721 1720 1719 1718 1717 1716 1715
18 APRIL 1973
6.7 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1741 1740 1739 1738 1737 1736 1735 1734 1733 1732 1731 1730 1729 1728
19 APRIL 1973
11.5 μm


min.
1741
1740
1739
1738
1737
1736
1735
1734
1733
1732
1731
1730
1729
1728
19 APRIL 1973
6.7 μm

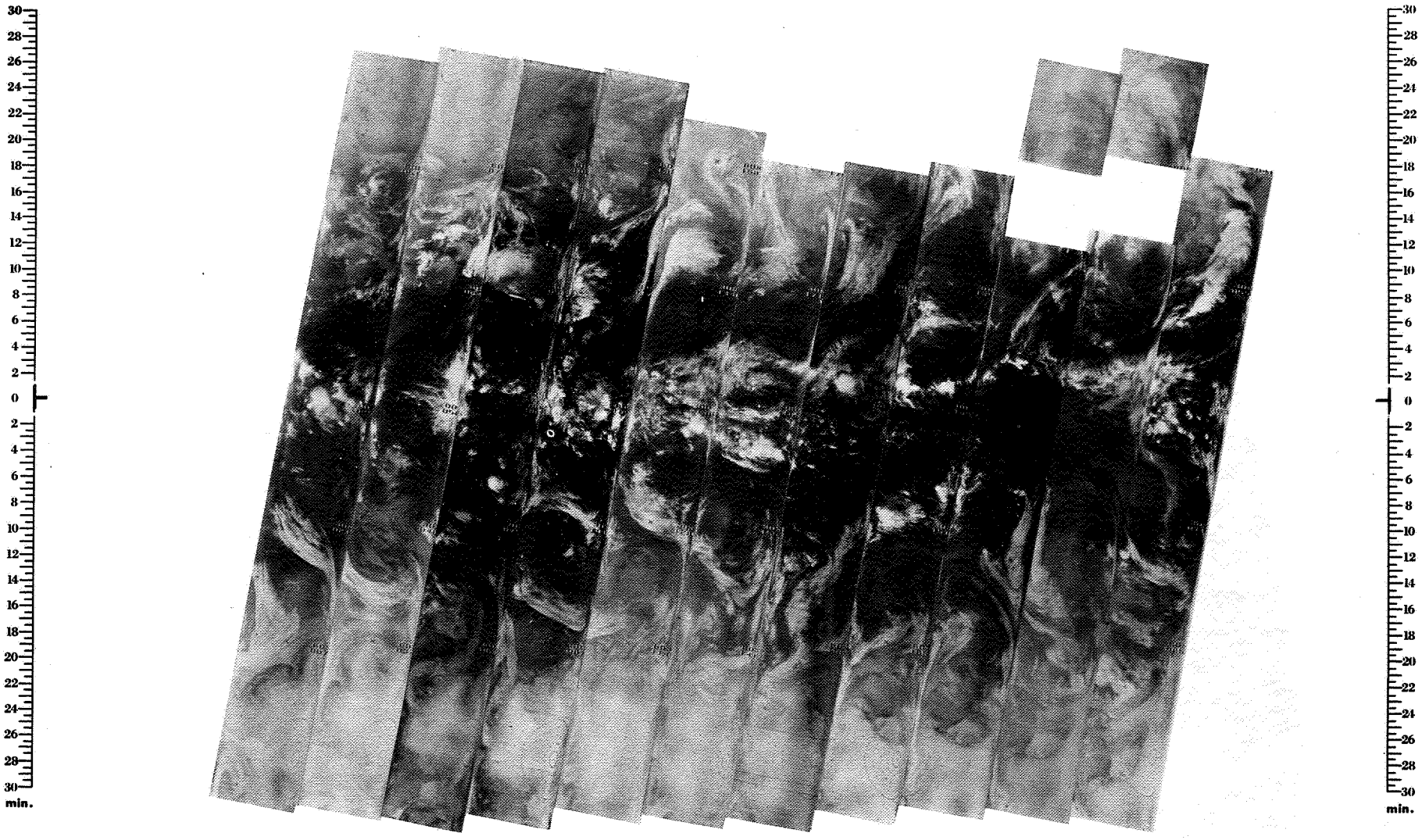

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1754 1753 1752 1751 1750 1749 1748 1747 1746 1745 1744 1743 1742
20 APRIL 1973
11.5 μm



1754 1753 1752 1751 1750 1749 1748 1747 1746 1745 1744 1743 1742

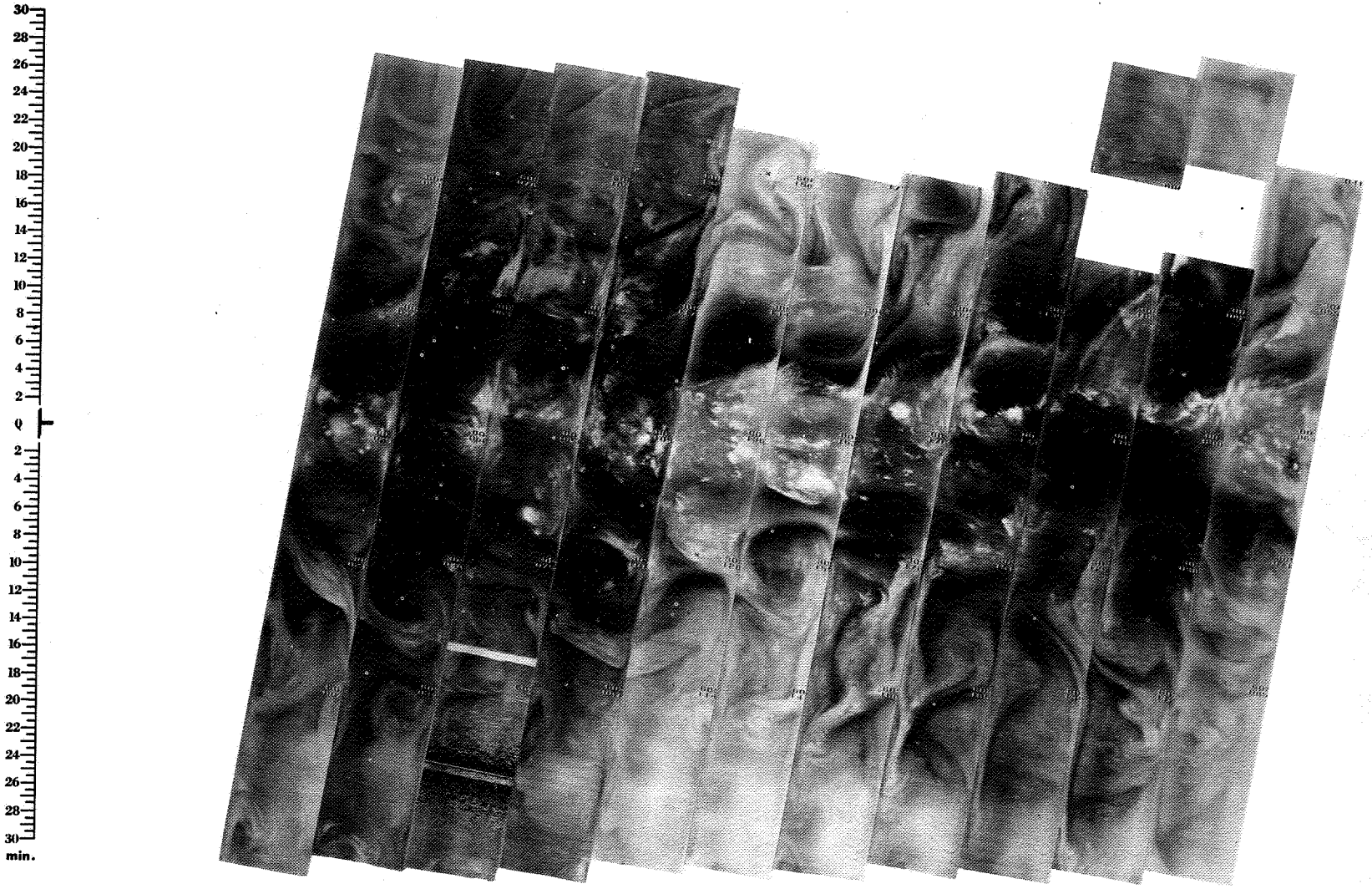
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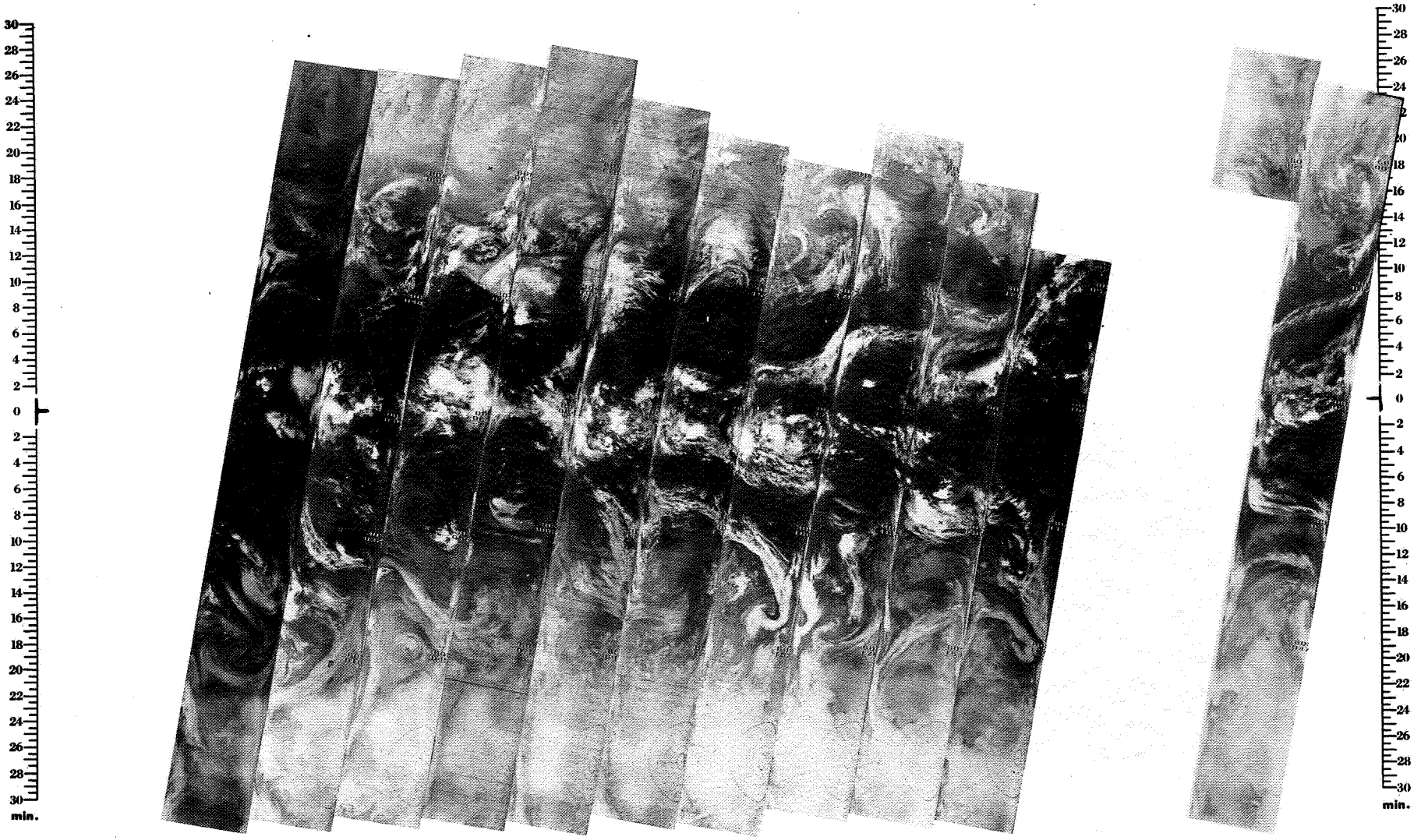
6.7 μm

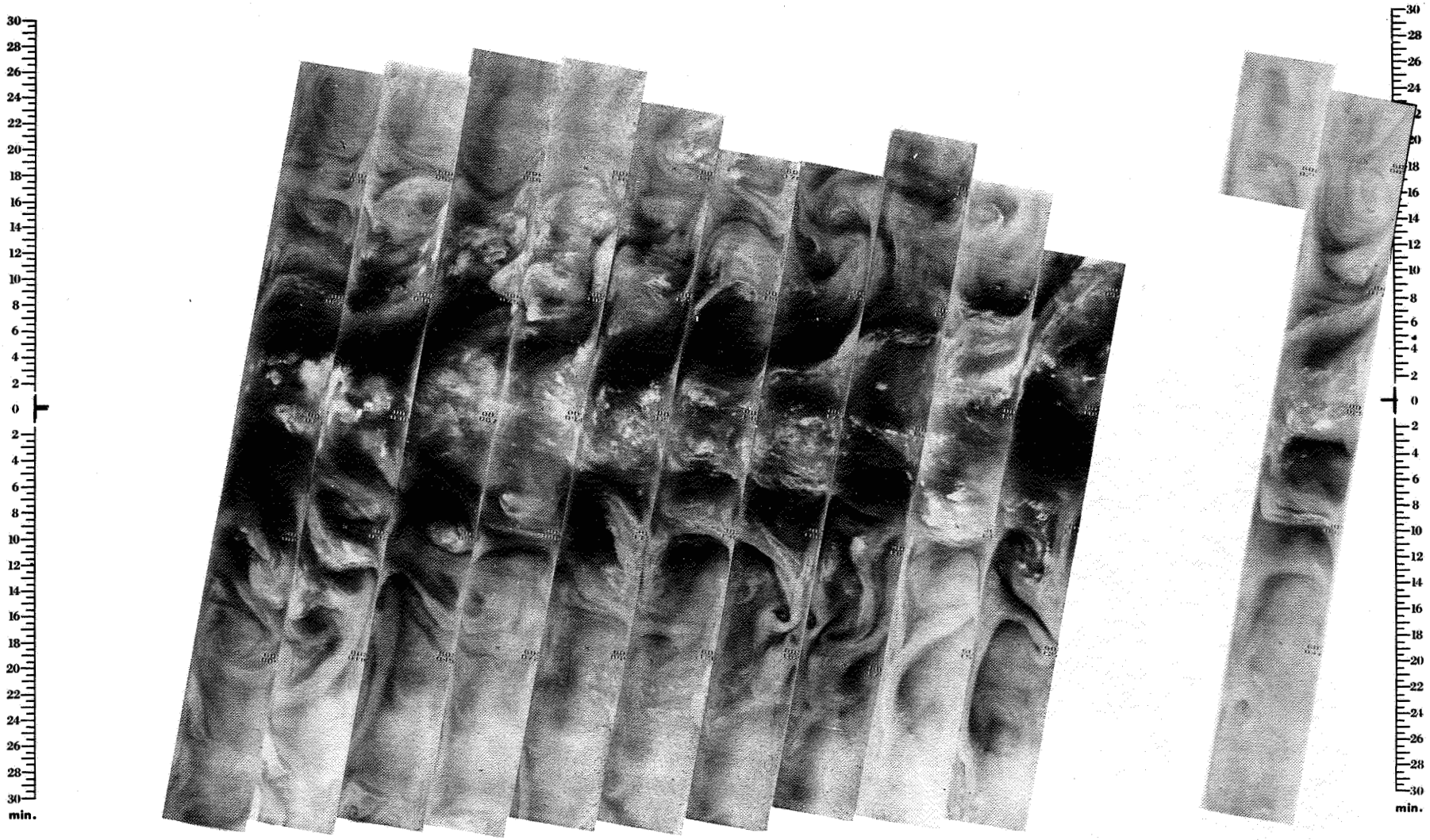


21 APRIL 1973

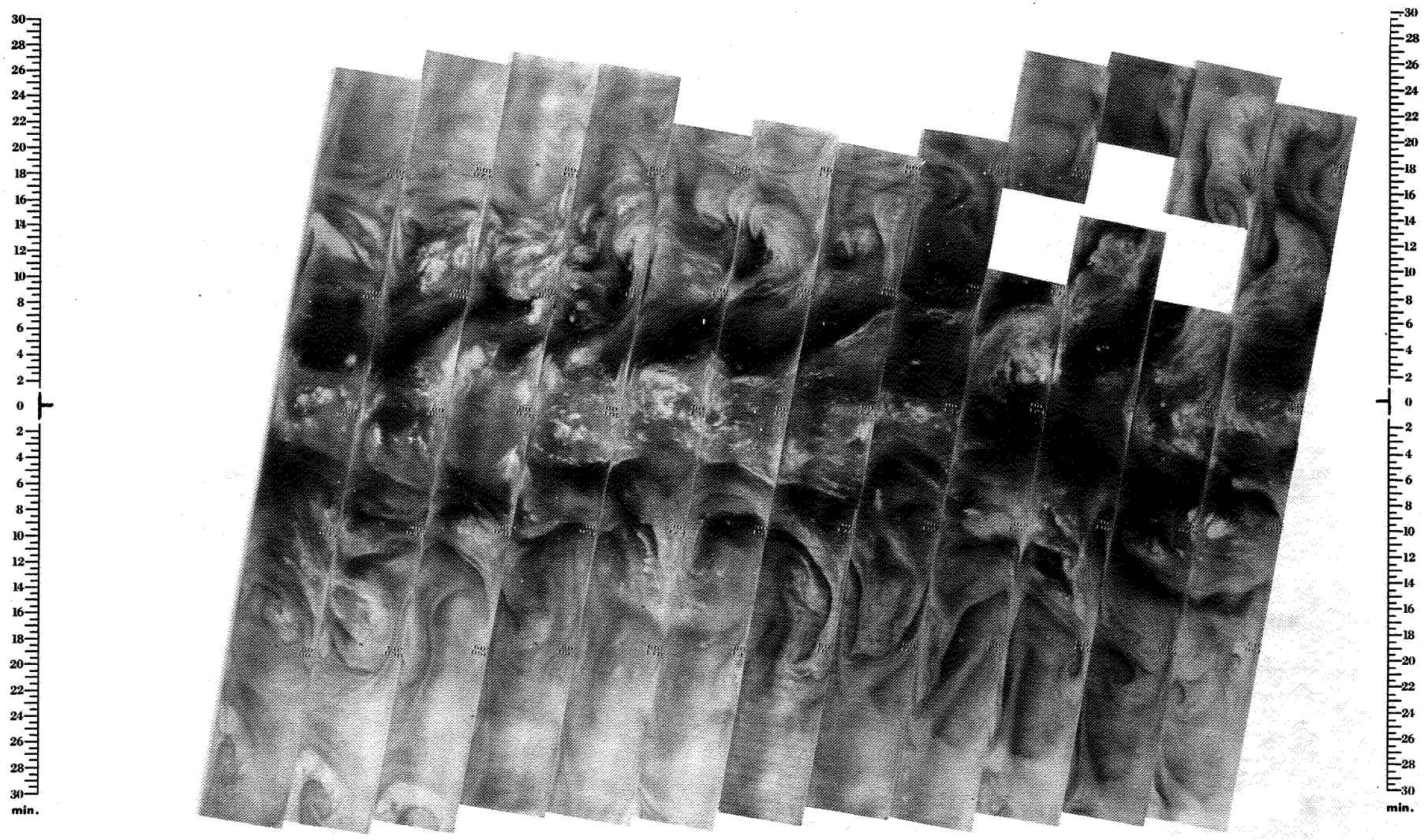
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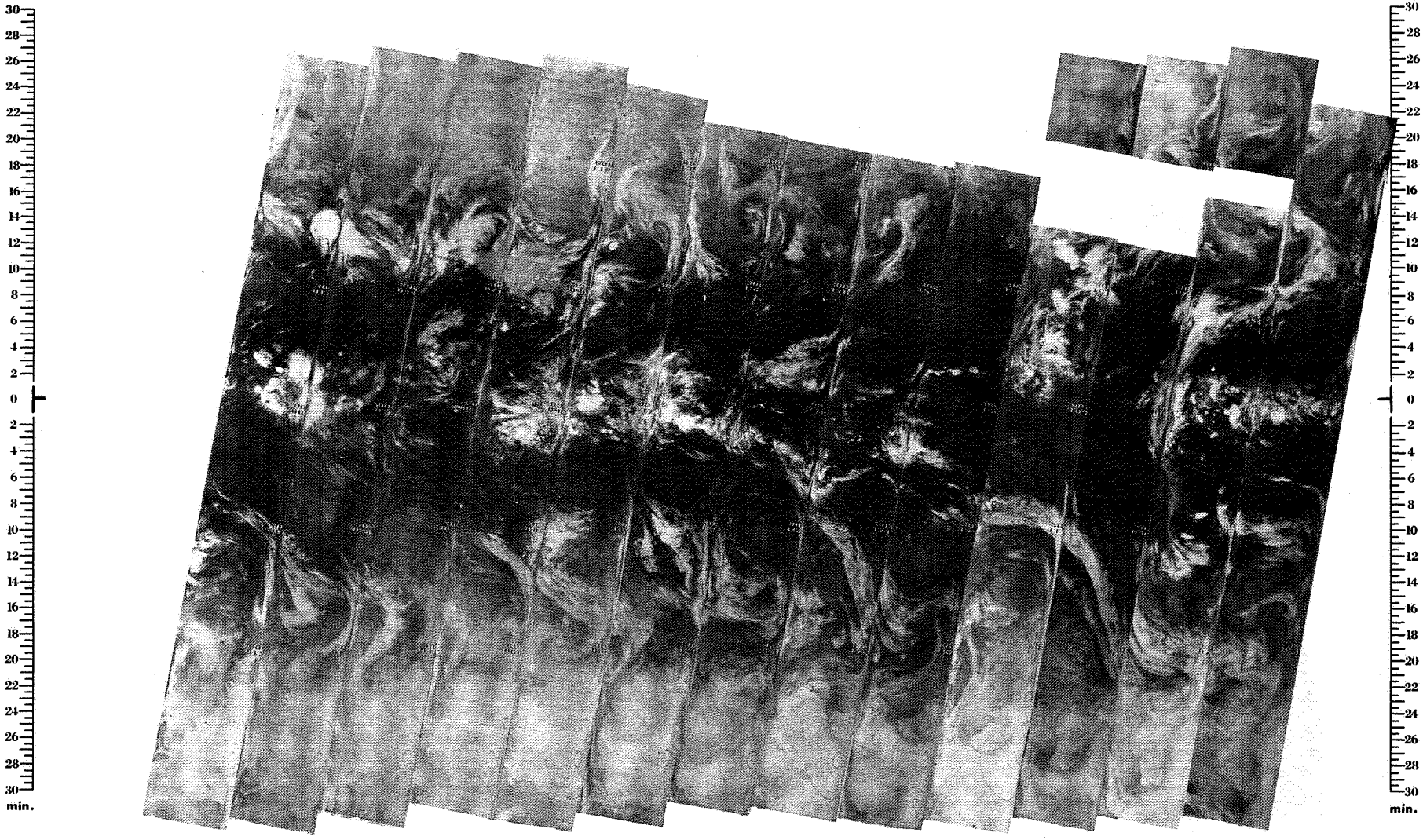

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
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min.
1767 1766 1765 1764 1763 1762 1761 1760 1759 1758 1757 1756 1755
21 APRIL 1973
6.7 μm

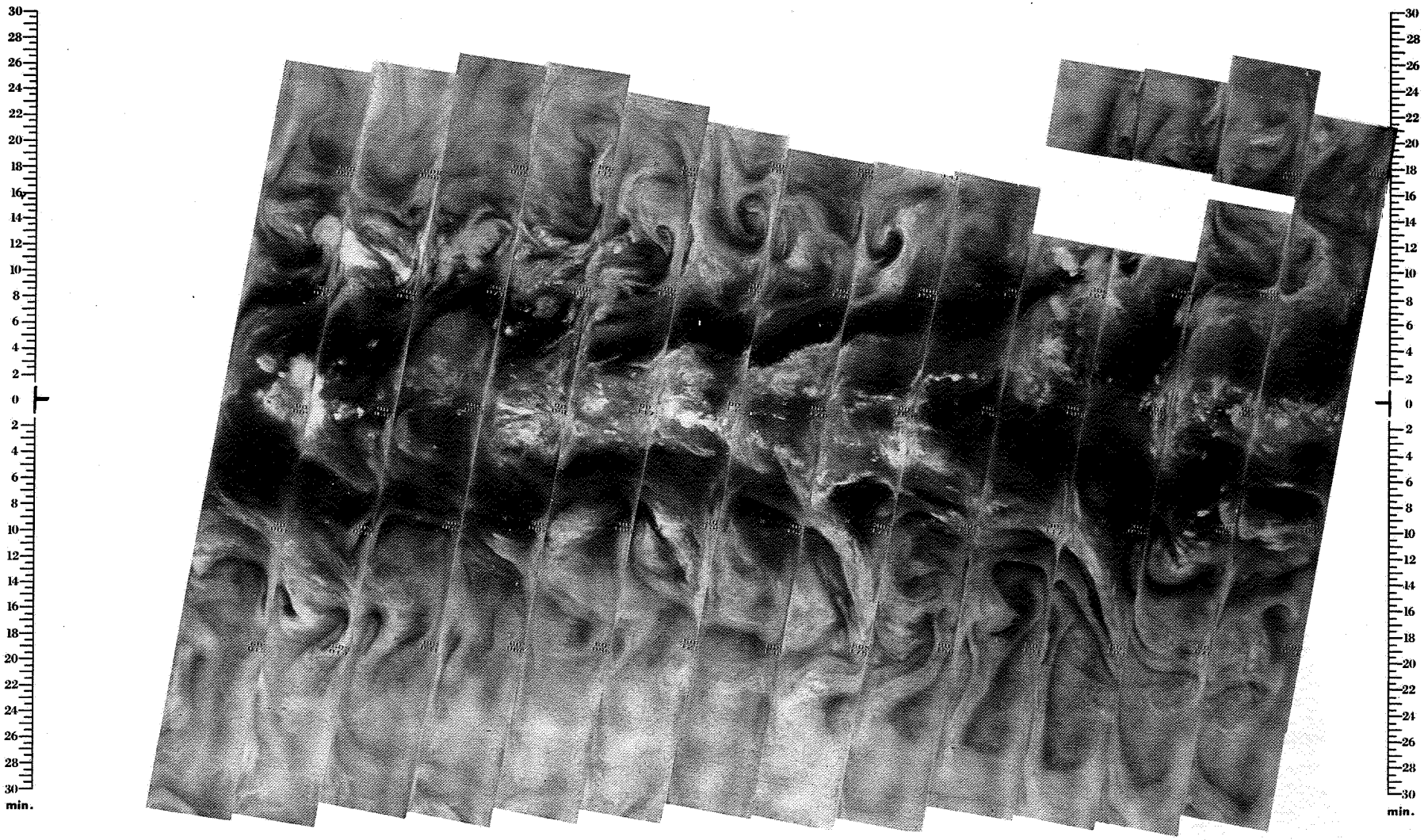

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min.
1781 1780 1779 1778 1777 1776 1775 1774 1773 1772 1771 1770 1769 1768
22 APRIL 1973
11.5 μm

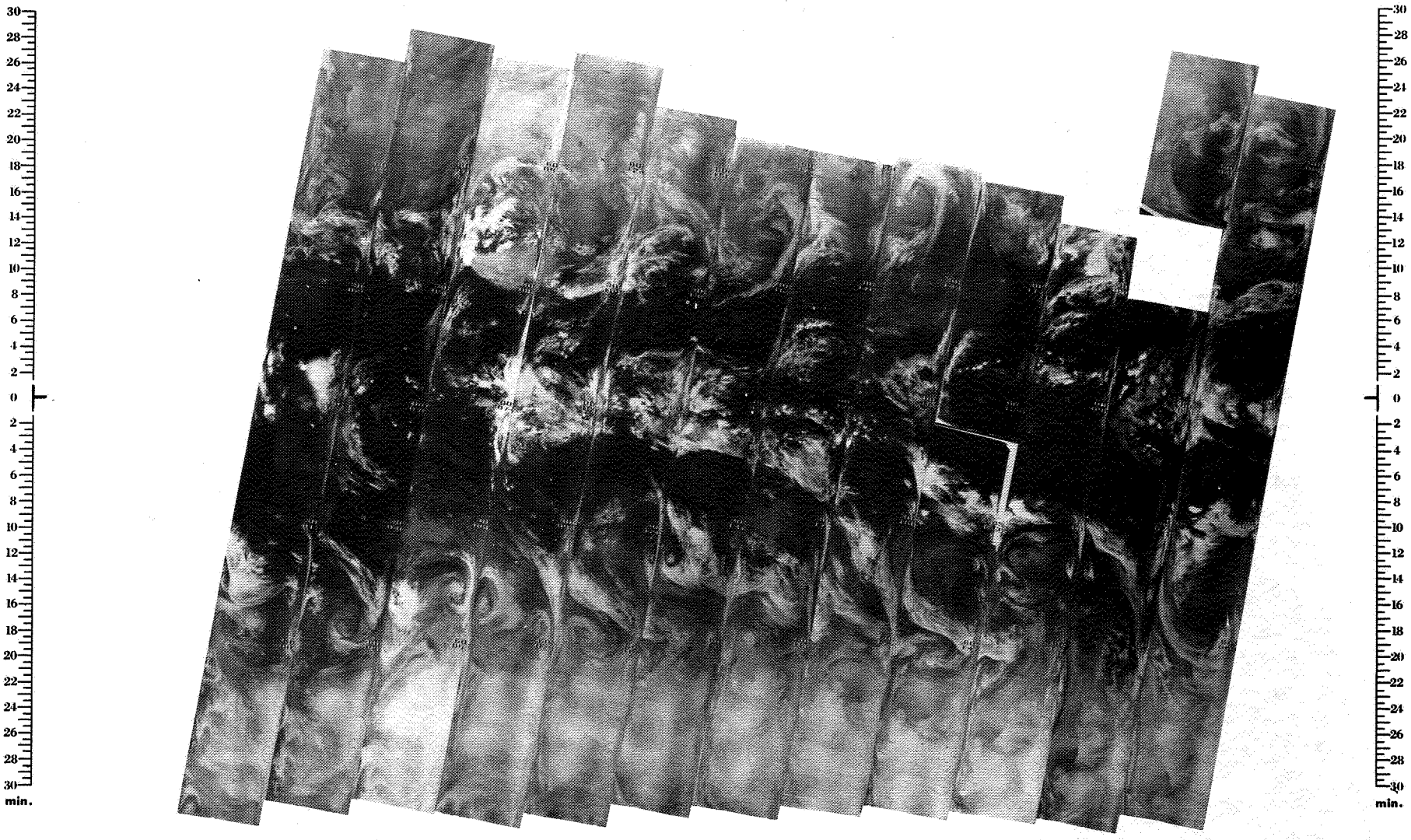

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6.7 μm

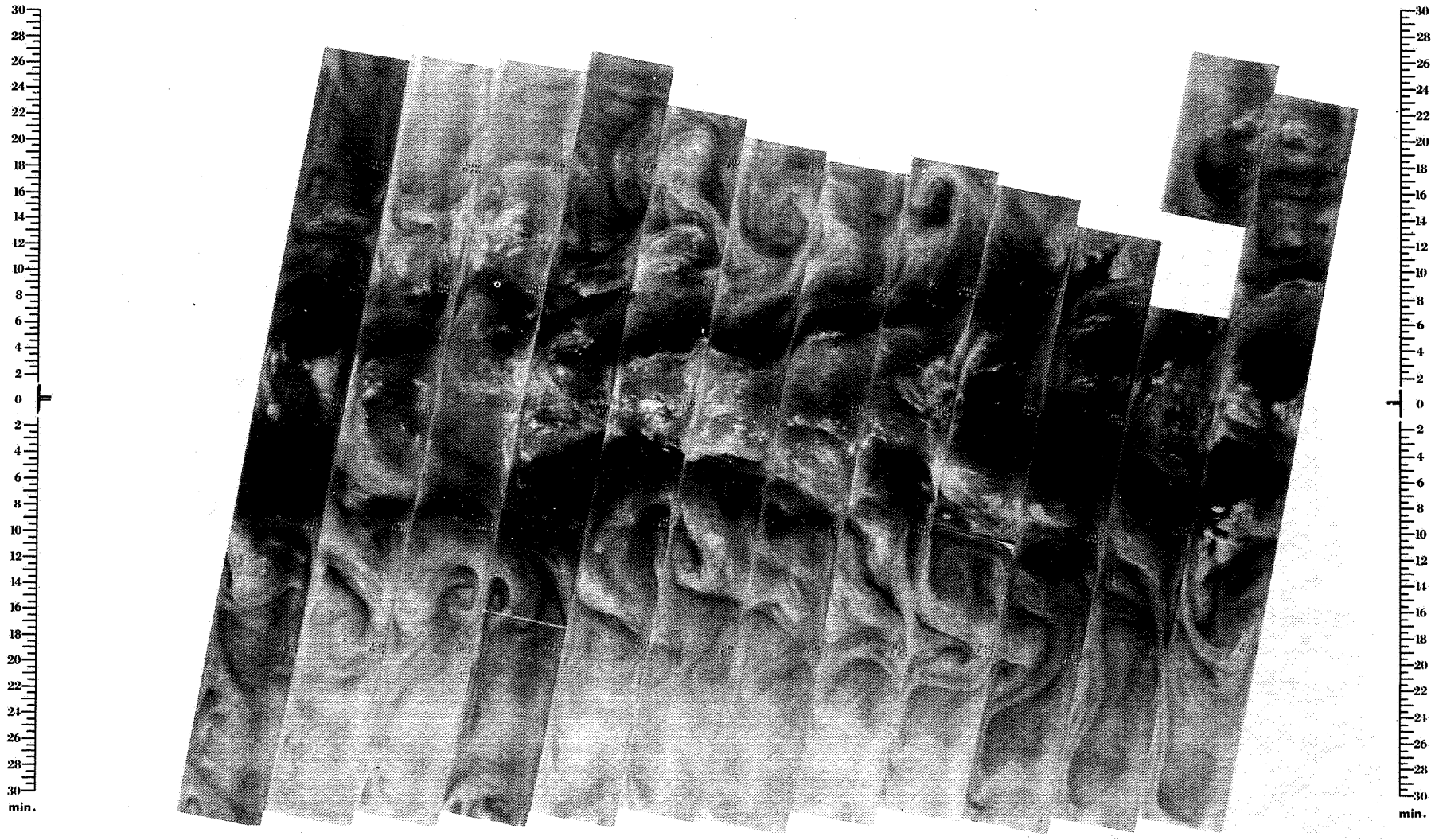

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min.
1794 1793 1792 1791 1790 1789 1788 1787 1786 1785 1784 1783 1782
23 APRIL 1973
11.5 μm

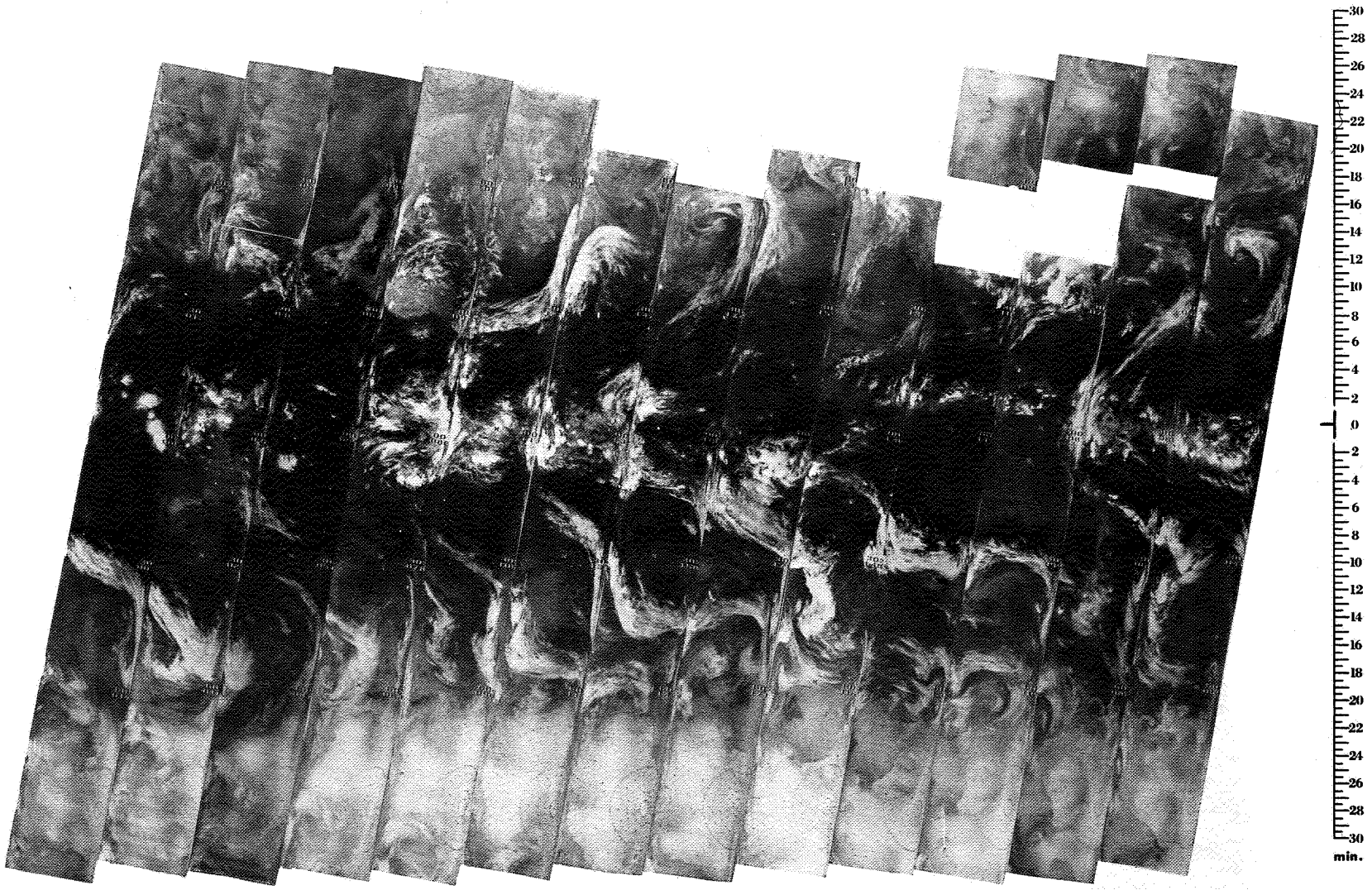

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min.
1794 1793 1792 1791 1790 1789 1788 1787 1786 1785 1784 1783 1782
23 APRIL 1973
6.7 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1808 1807 1806 1805 1804 1803 1802 1801 1800 1799 1798 1797 1796 1795
24 APRIL 1973
11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1808 1807 1806 1805 1804 1803 1802 1801 1800 1799 1798 1797 1796 1795
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6.7 μm

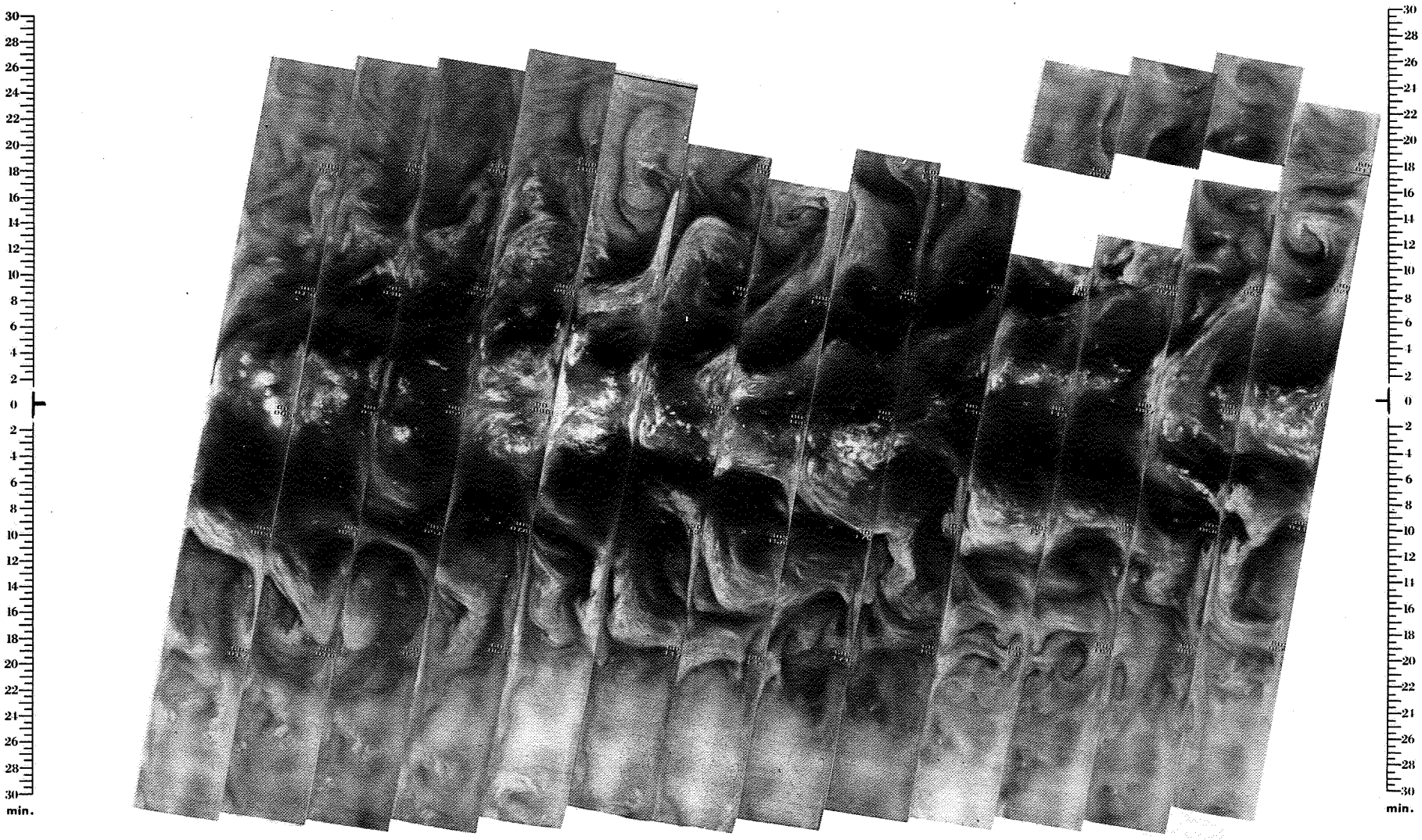

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min.
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25 APRIL 1973
11.5 μm

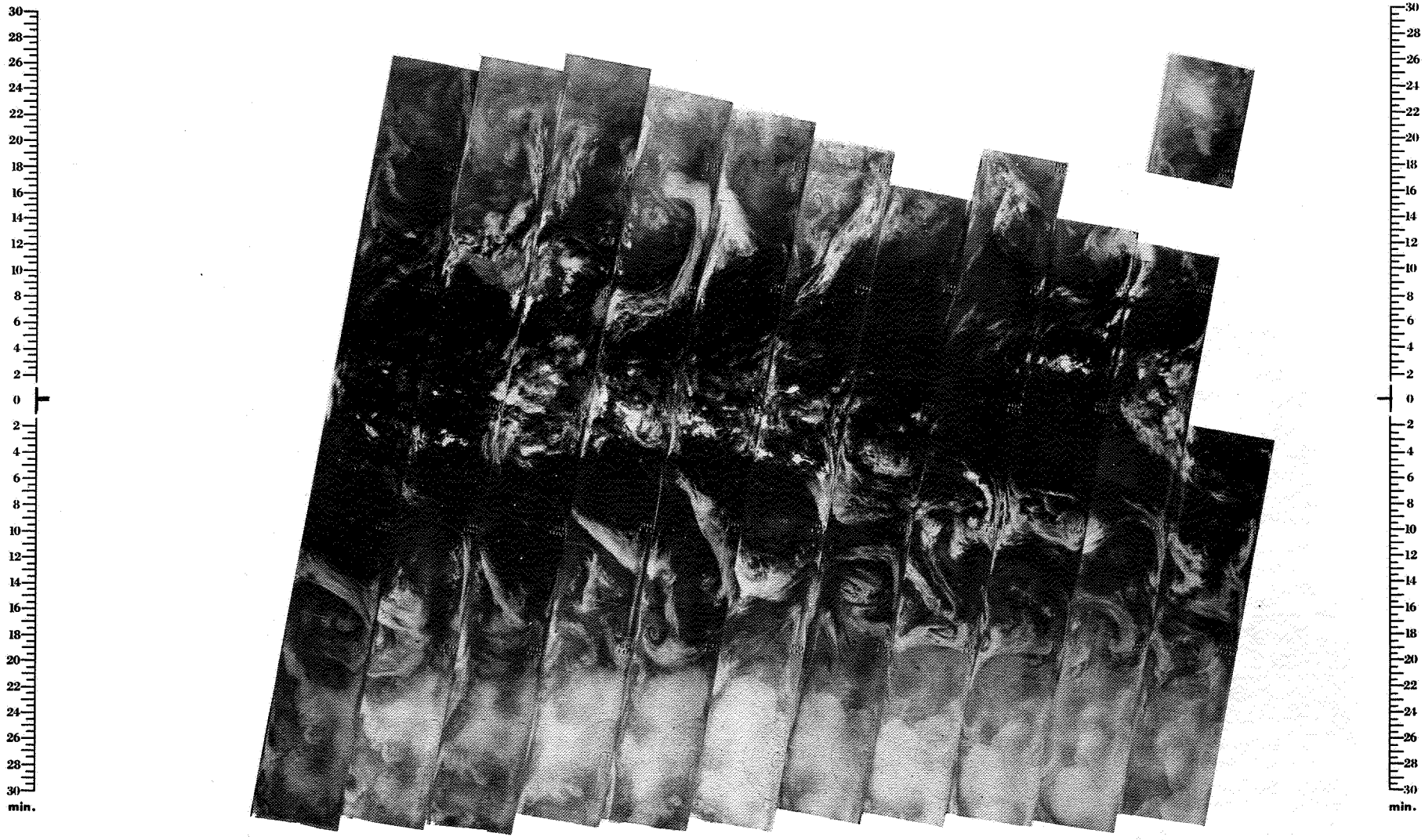

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min.
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25 APRIL 1973
6.7 μm

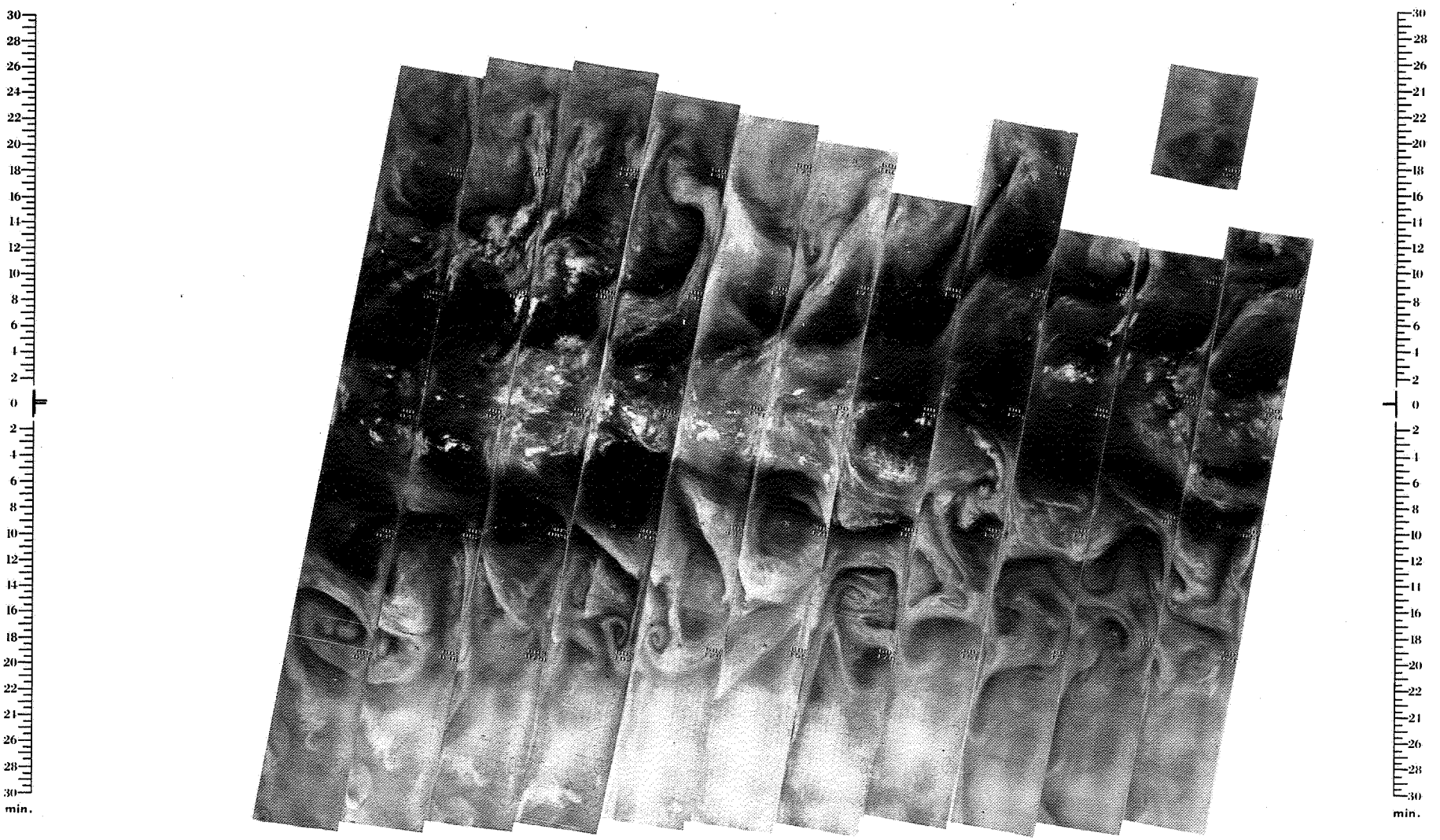


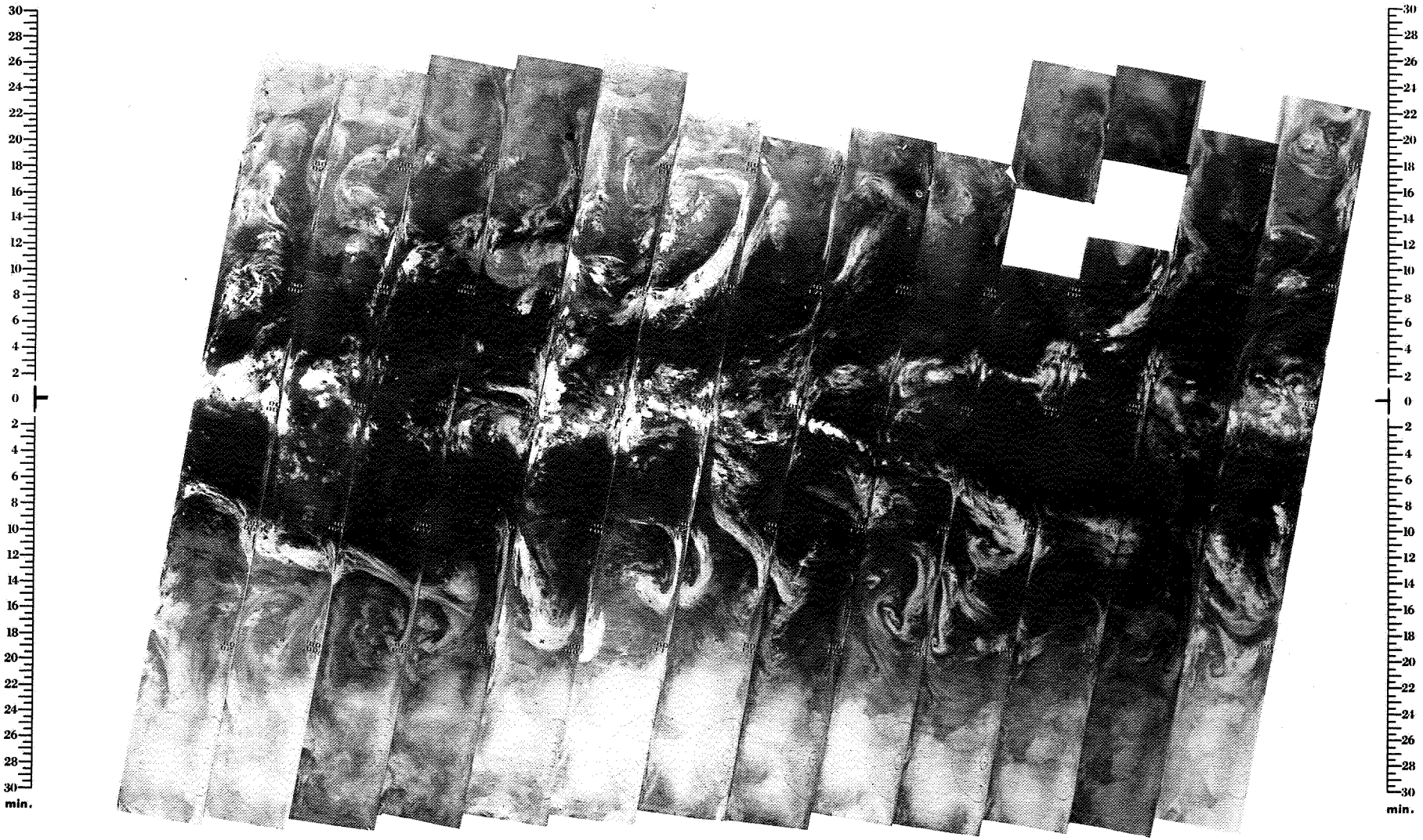
26 APRIL 1973

11.5 μm


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min.
1834 1833 1832 1831 1830 1829 1828 1827 1826 1825 1824 1823 1822
26 APRIL 1973
6.7 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1848 1847 1846 1845 1844 1843 1842 1841 1840 1839 1838 1837 1836 1835
27 APRIL 1973
11.5 μm


min.
min.
1848
1847
1846
1845
1844
1843
1842
1841
1840
1839
1838
1837
1836
1835
27 APRIL 1973
6.7 μm

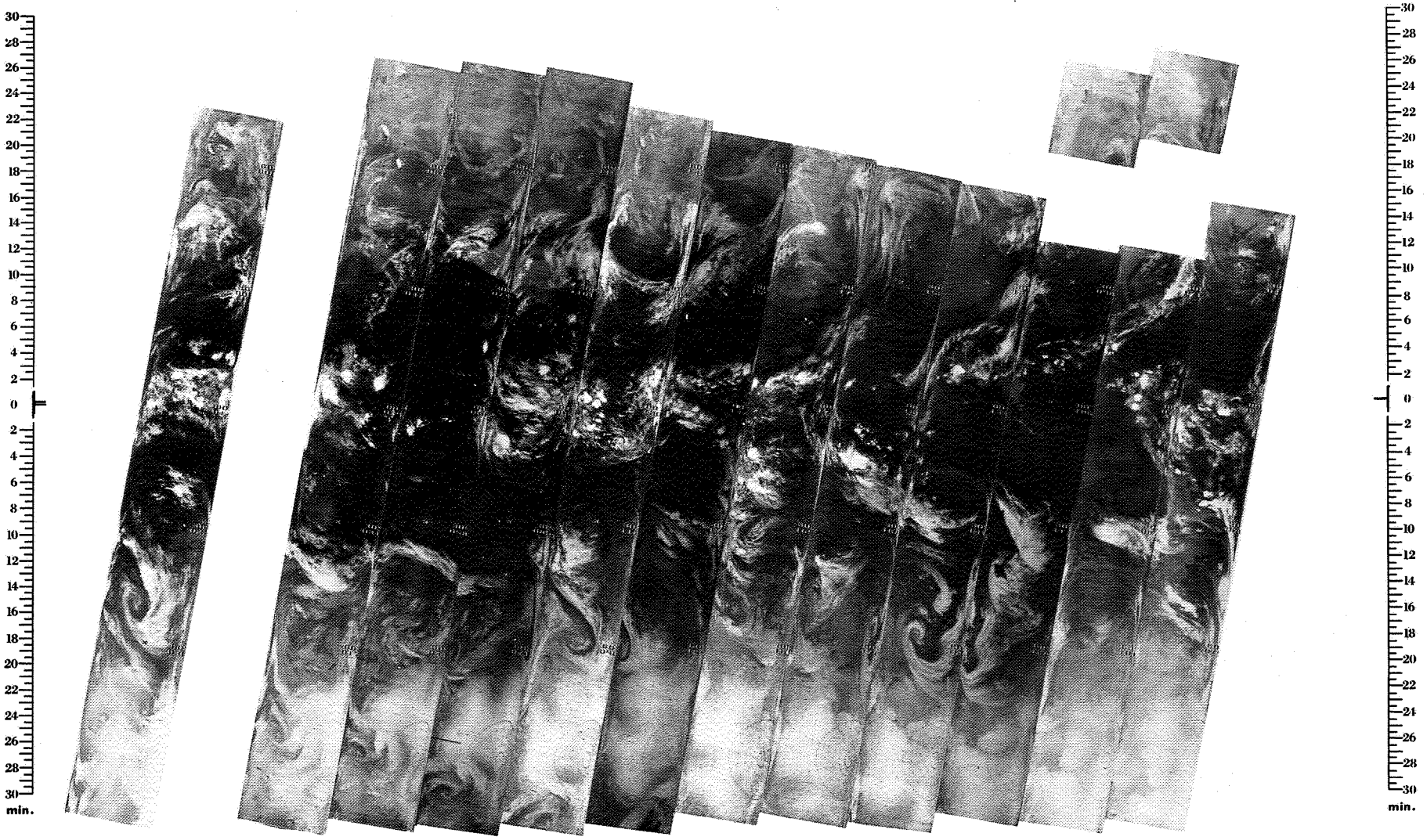

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min.
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min.
1861 1860 1859 1858 1857 1856 1855 1854 1853 1852 1851 1850 1849
28 APRIL 1973
11.5 μm



1861 1860 1859 1858 1857 1856 1855 1854 1853 1852 1851 1850 1849

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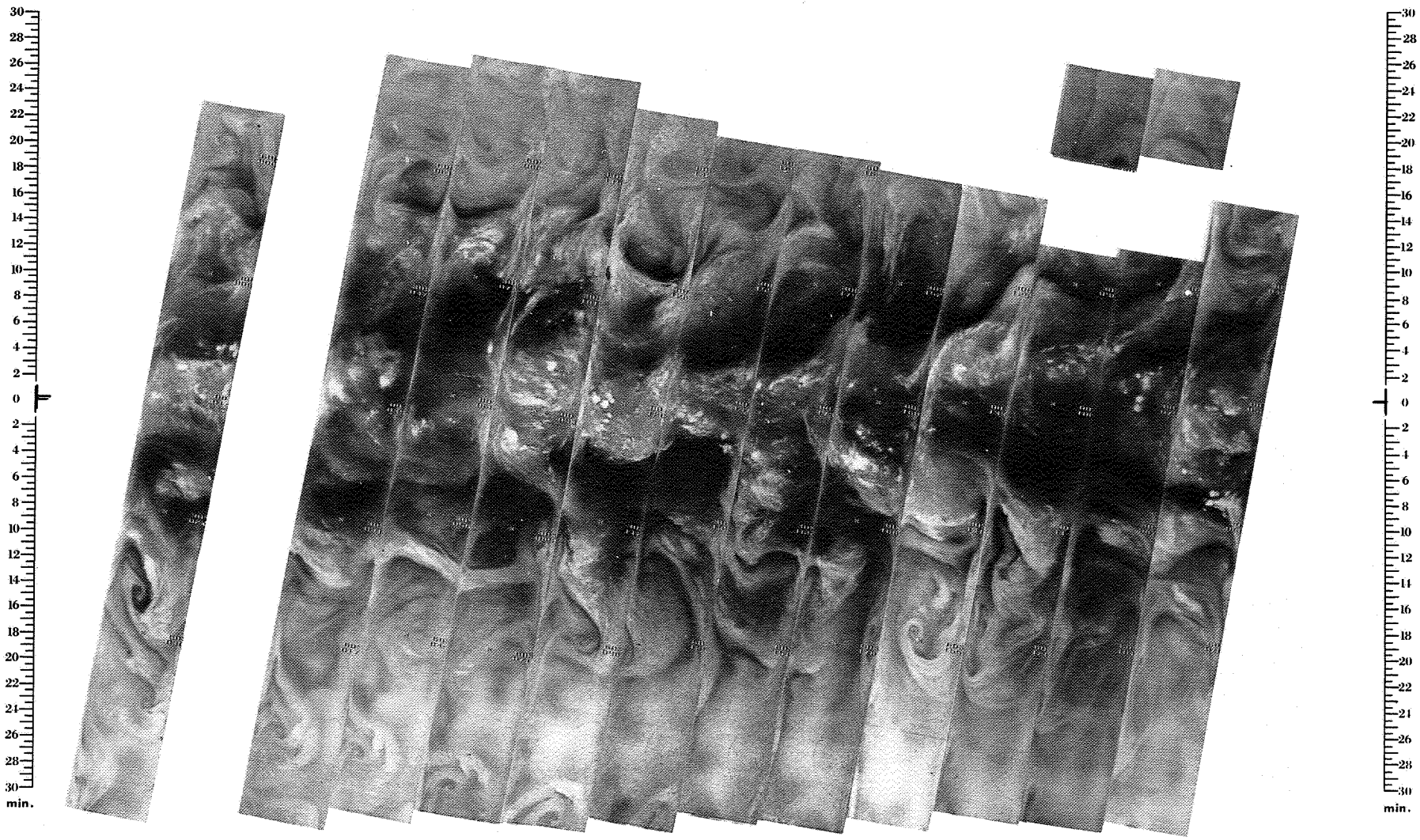
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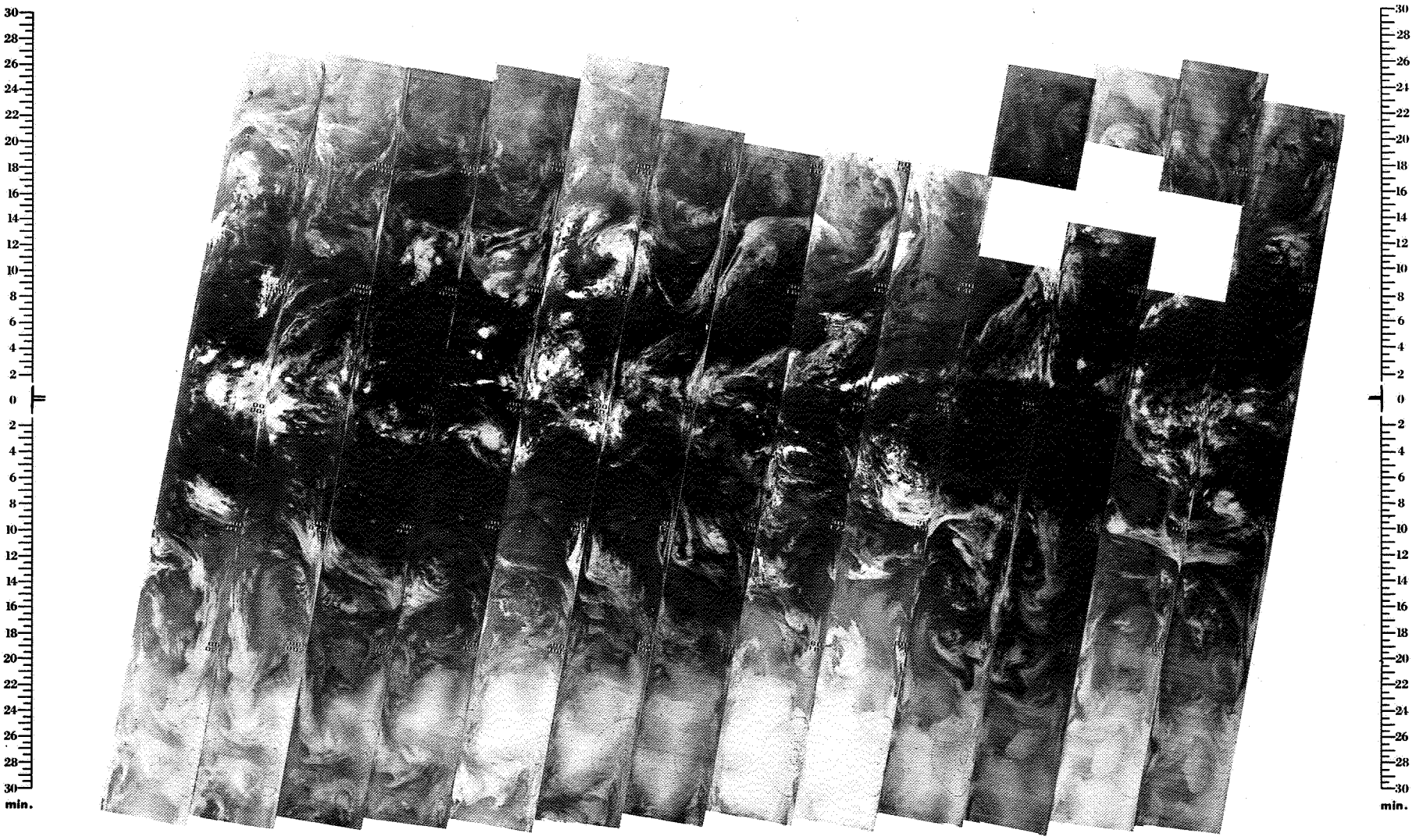


1875 1874 1873 1872 1871 1870 1869 1868 1867 1866 1865 1864 1863 1862

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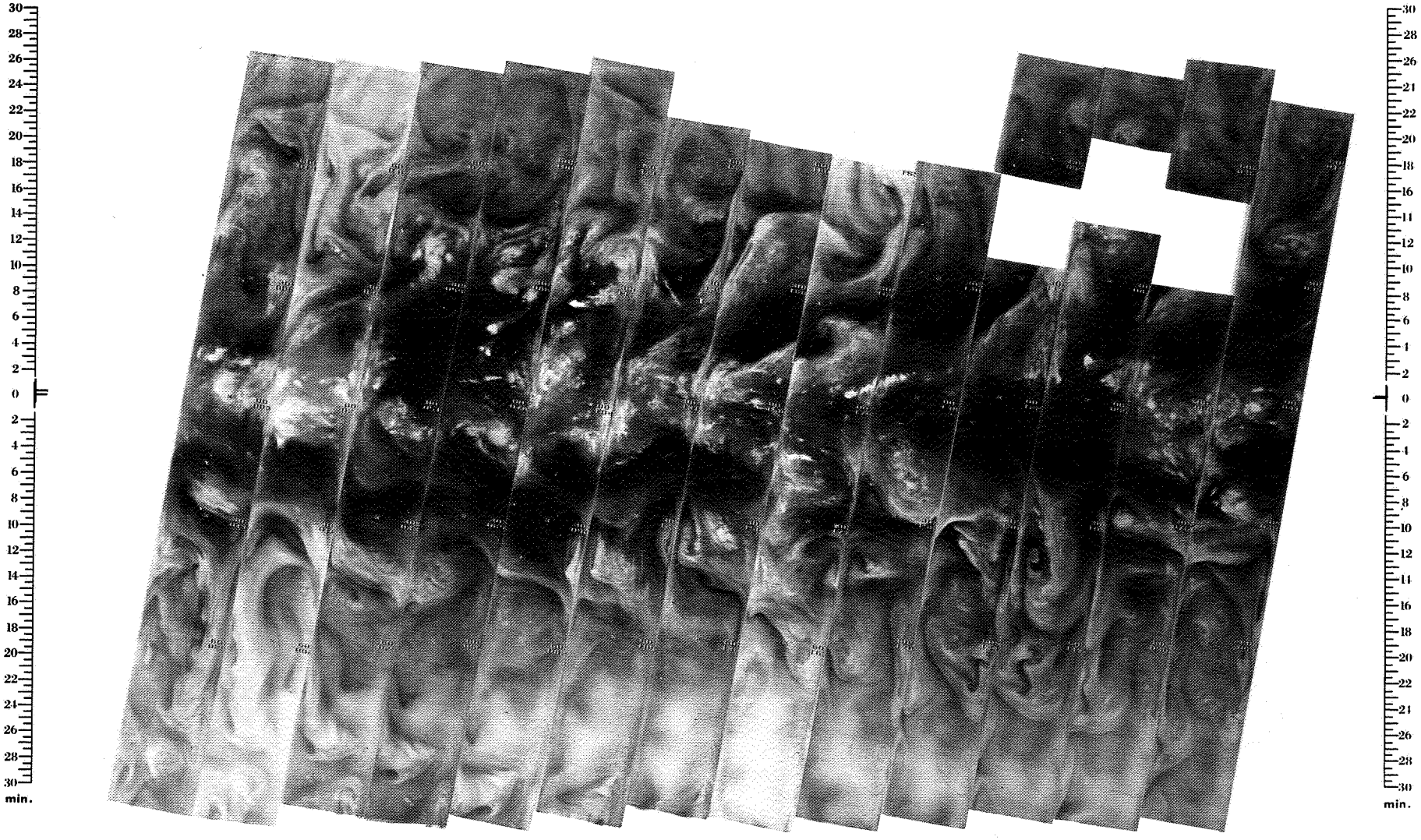
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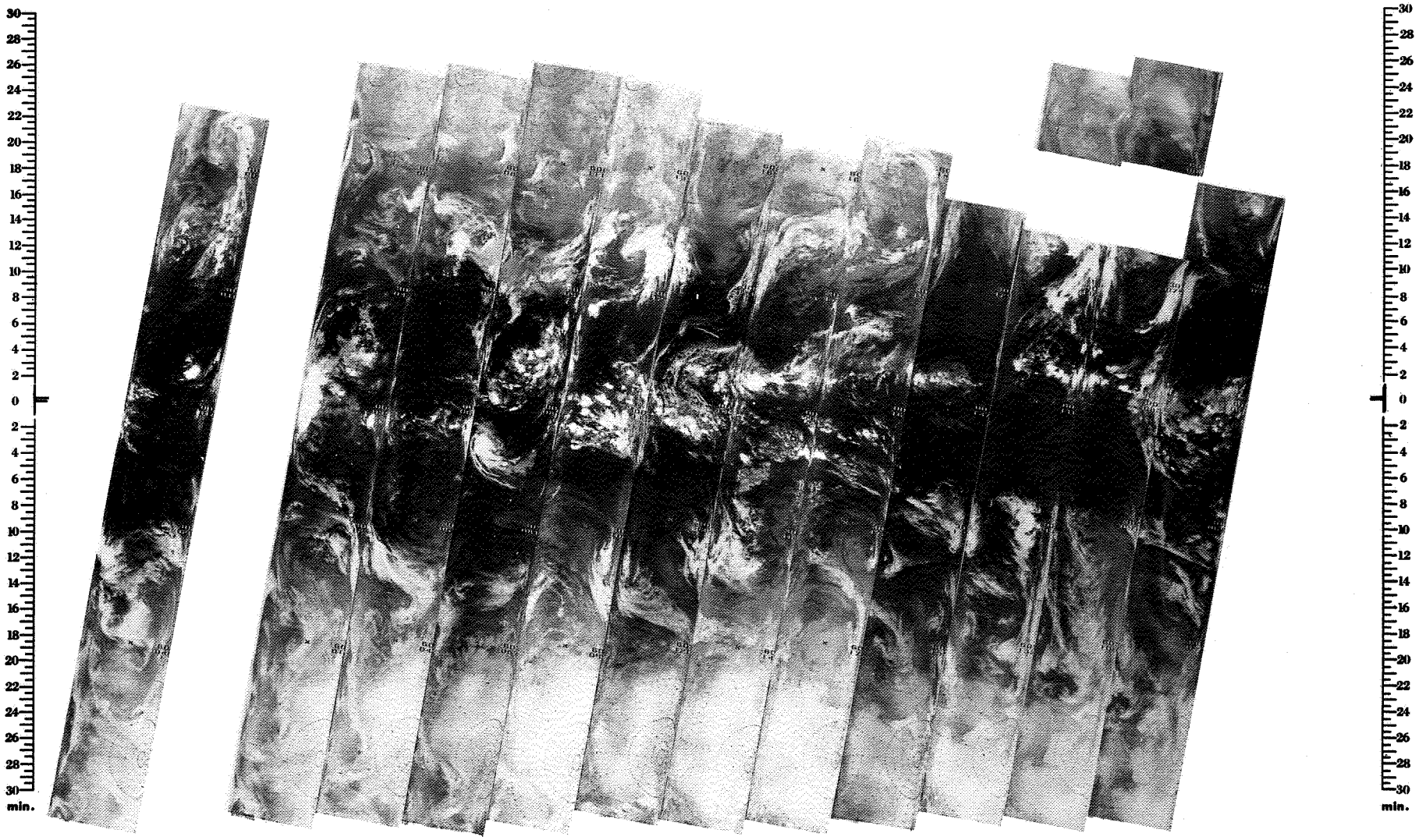

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min.
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29 APRIL 1973
6.7 μm



30 APRIL 1973

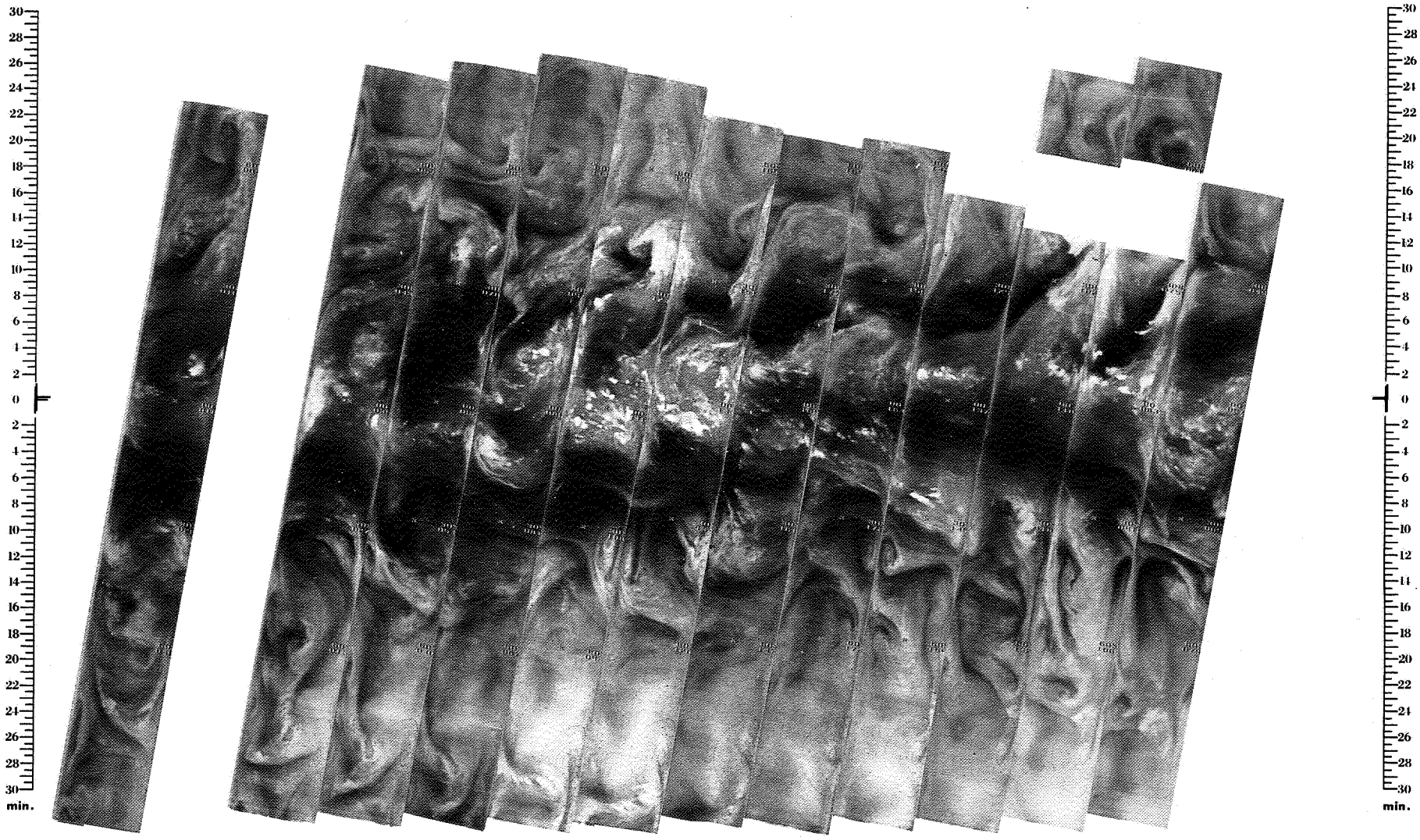
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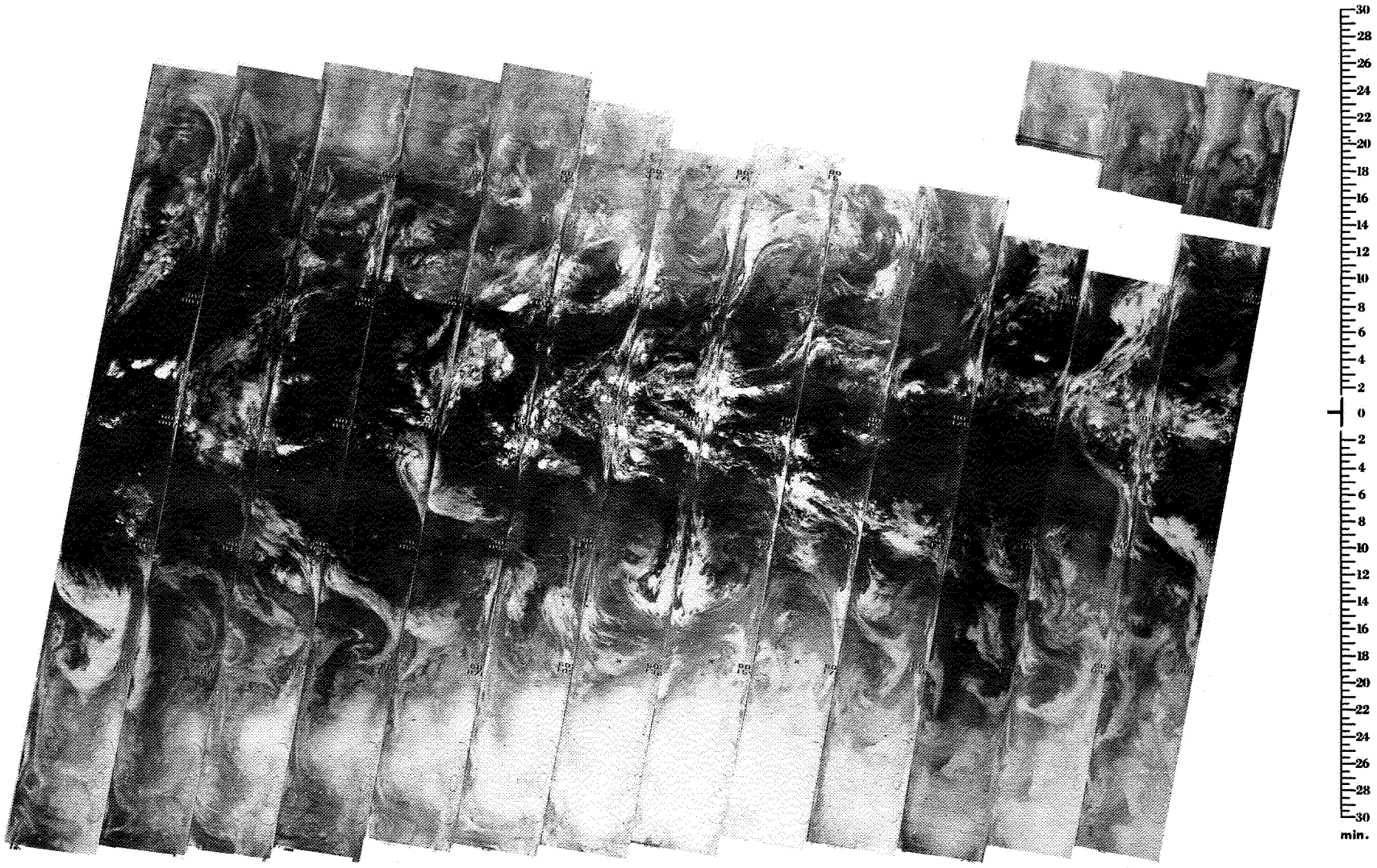

min.
min.
1888
1887
1886
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1882
1881
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1879
1878
1877
1876
30 APRIL 1973
6.7 μm



1 MAY 1973

11.5 μm

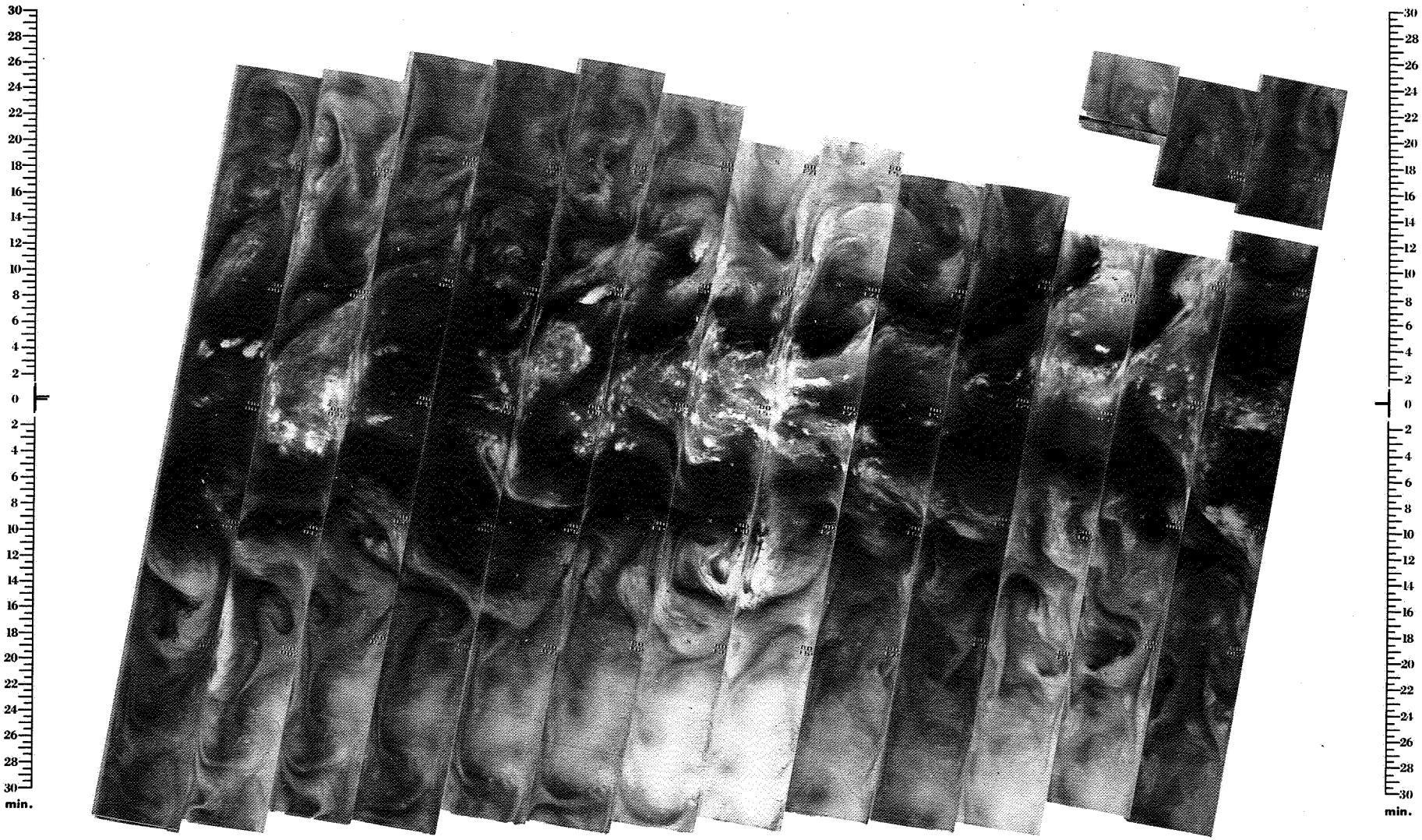

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1902 1901 1900 1899 1898 1897 1896 1895 1894 1893 1892 1891 1890 1889
1 MAY 1973
6.7 μm



1915 1914 1913 1912 1911 1910 1909 1908 1907 1906 1905 1904 1903

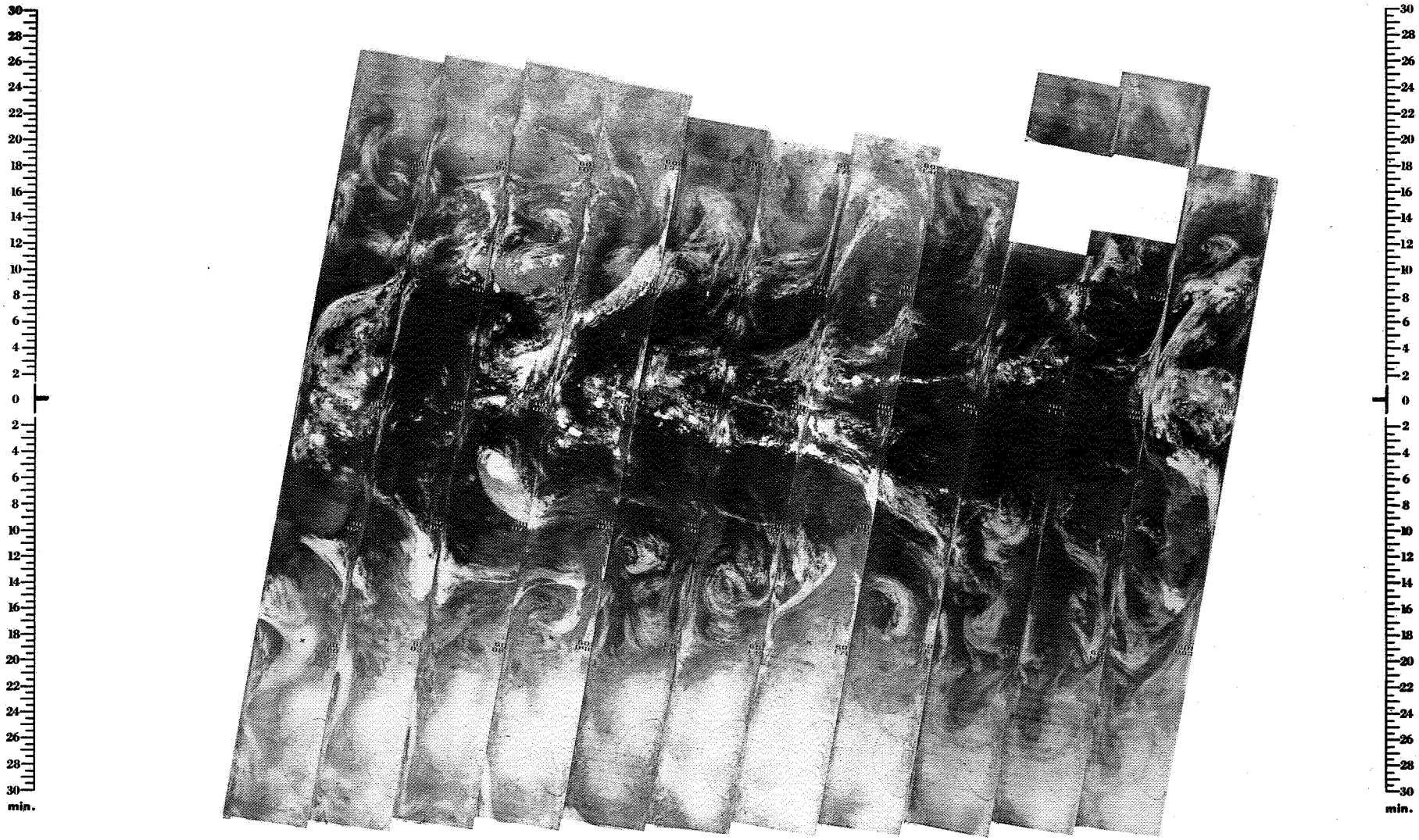
2 MAY 1973

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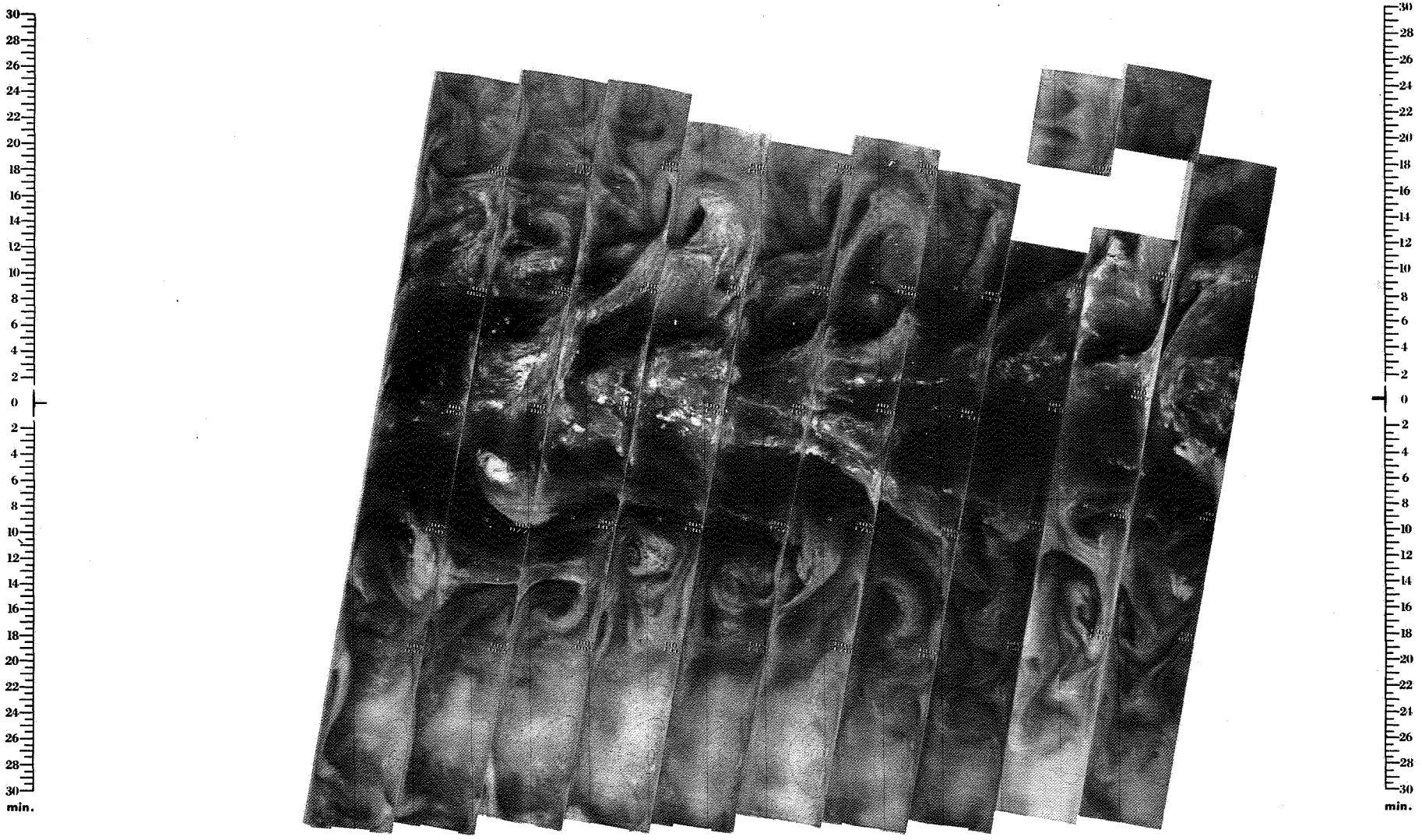
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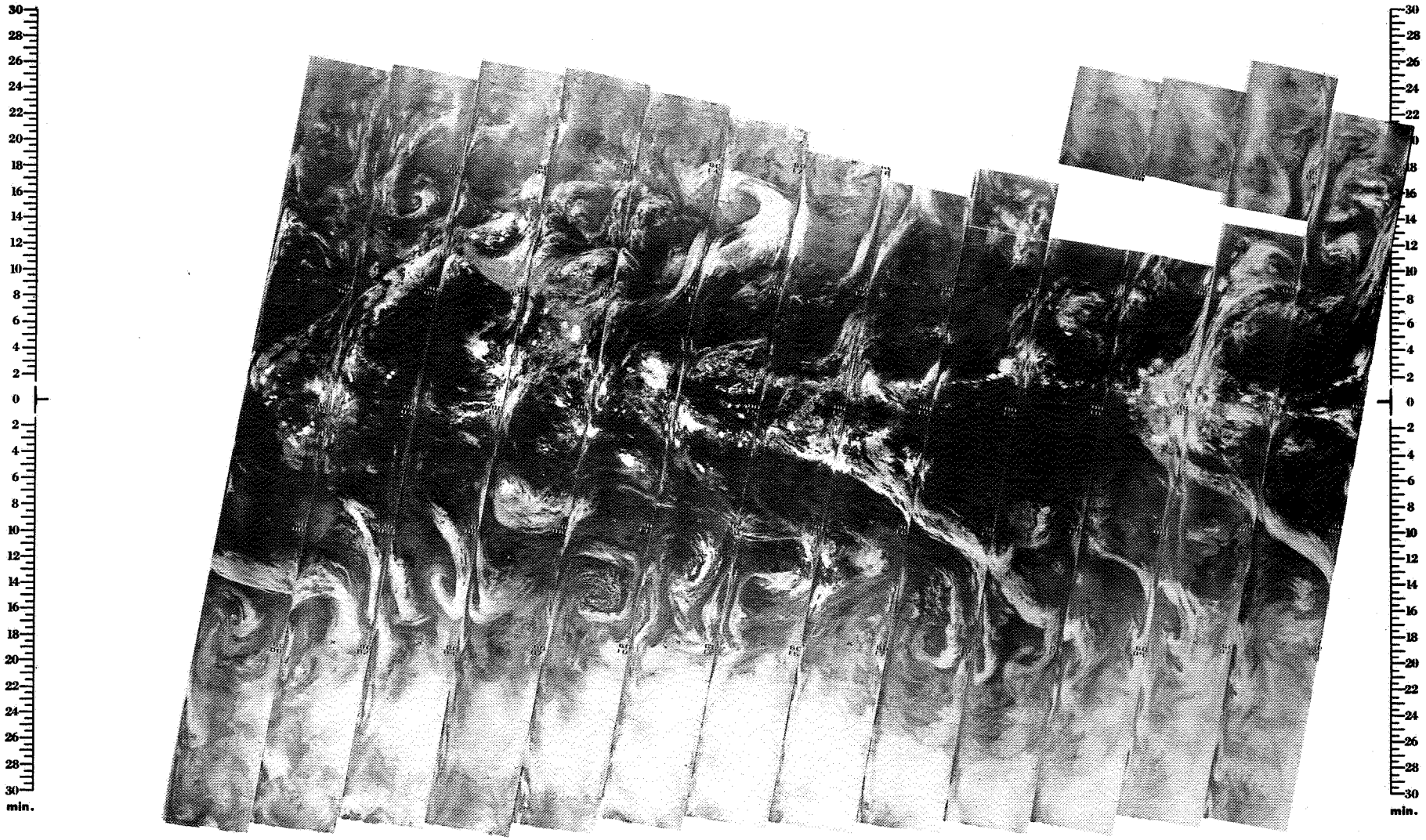
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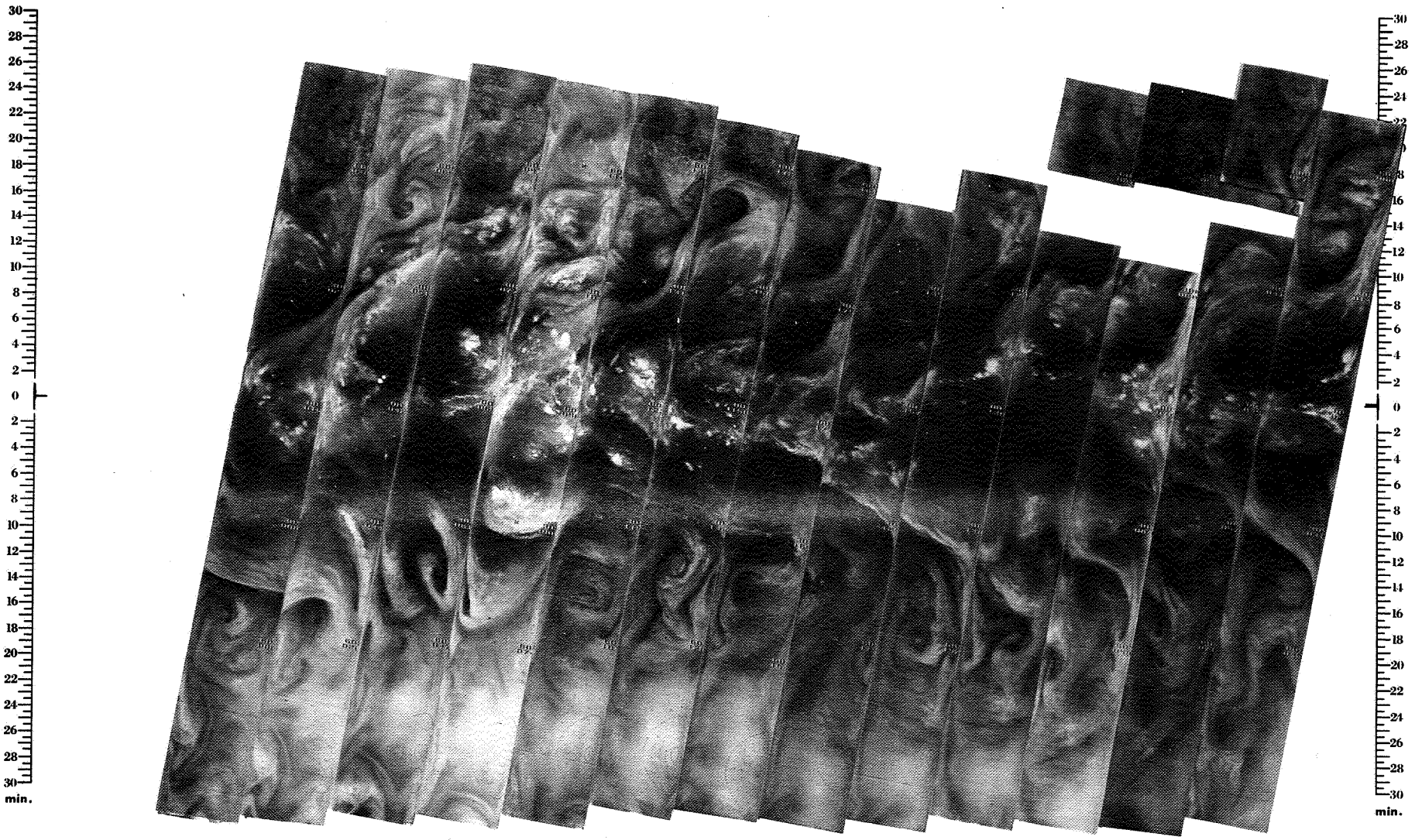
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3 MAY 1973

6.7 μm

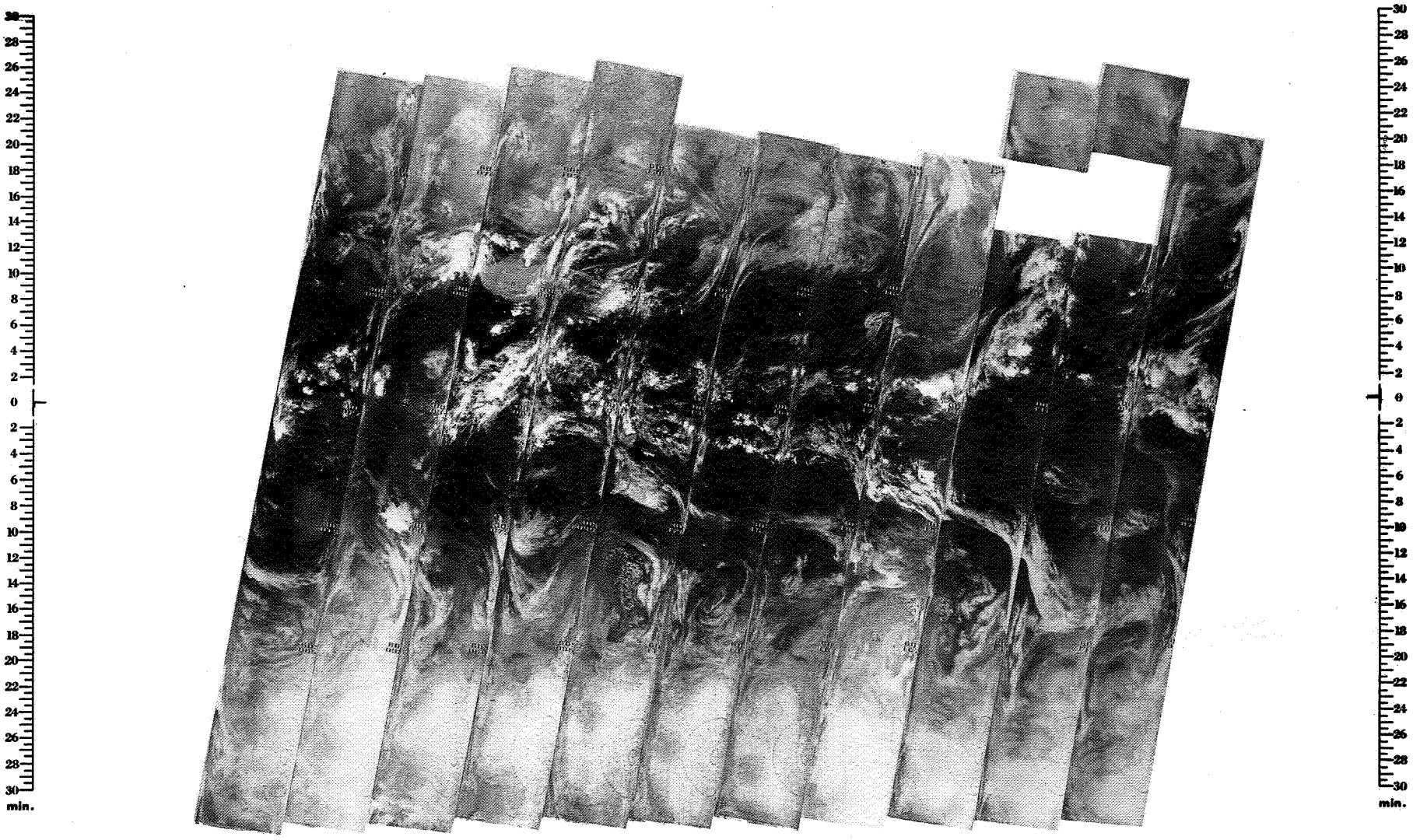

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min.
1942 1941 1940 1939 1938 1937 1936 1935 1934 1933 1932 1931 1930 1929
4 MAY 1973
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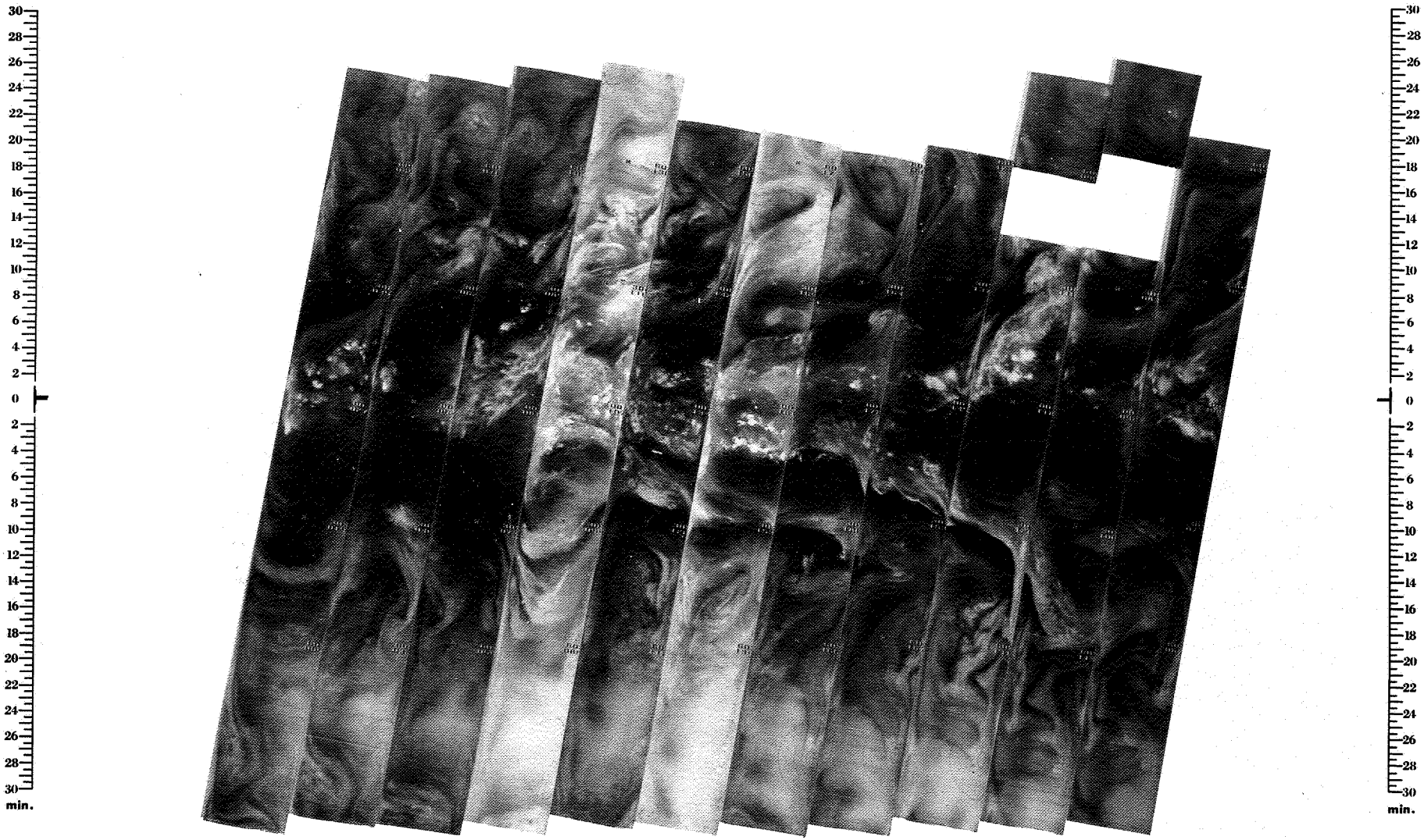


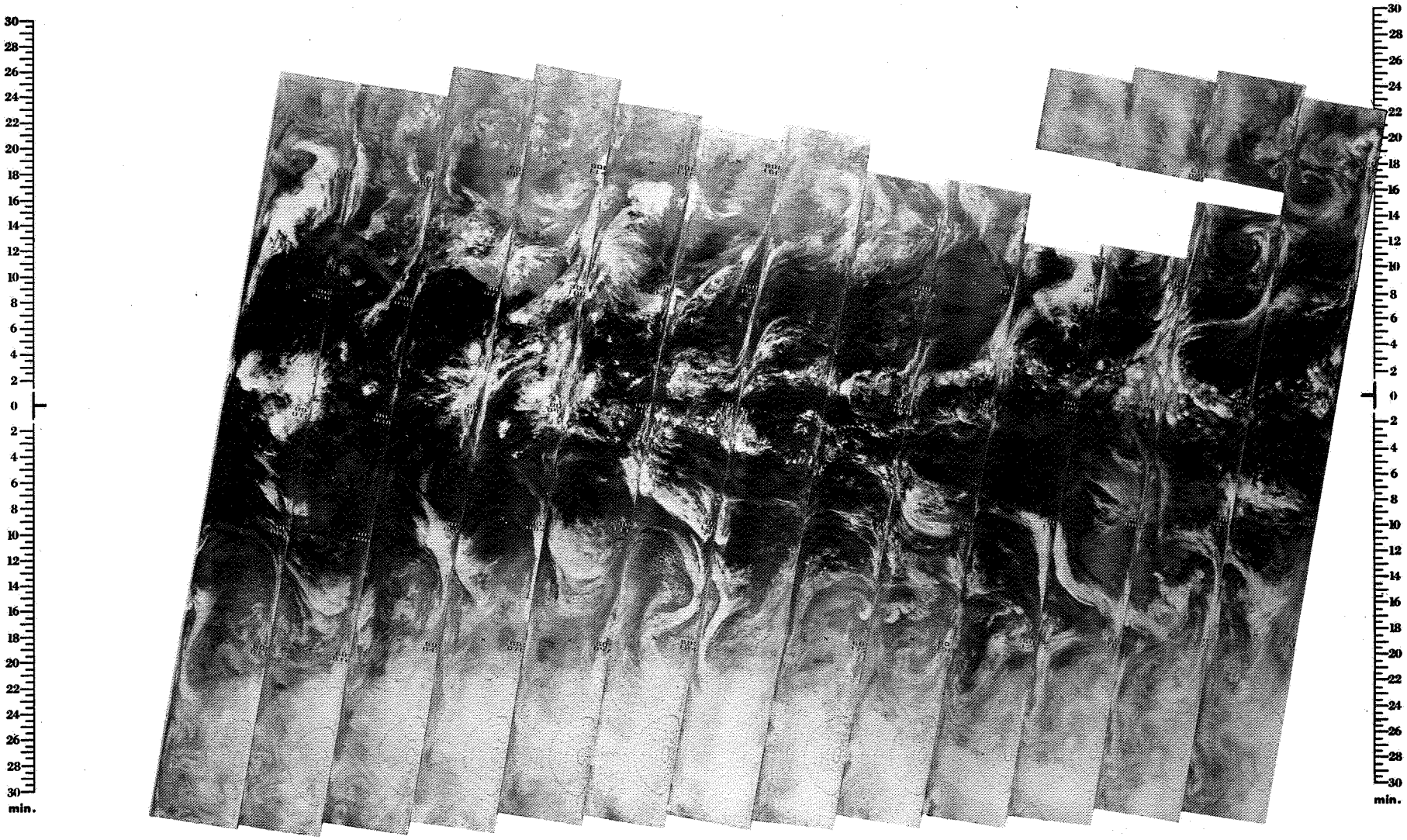
1942 1941 1940 1939 1938 1937 1936 1935 1934 1933 1932 1931 1930 1929

4 MAY 1973

6.7 μm

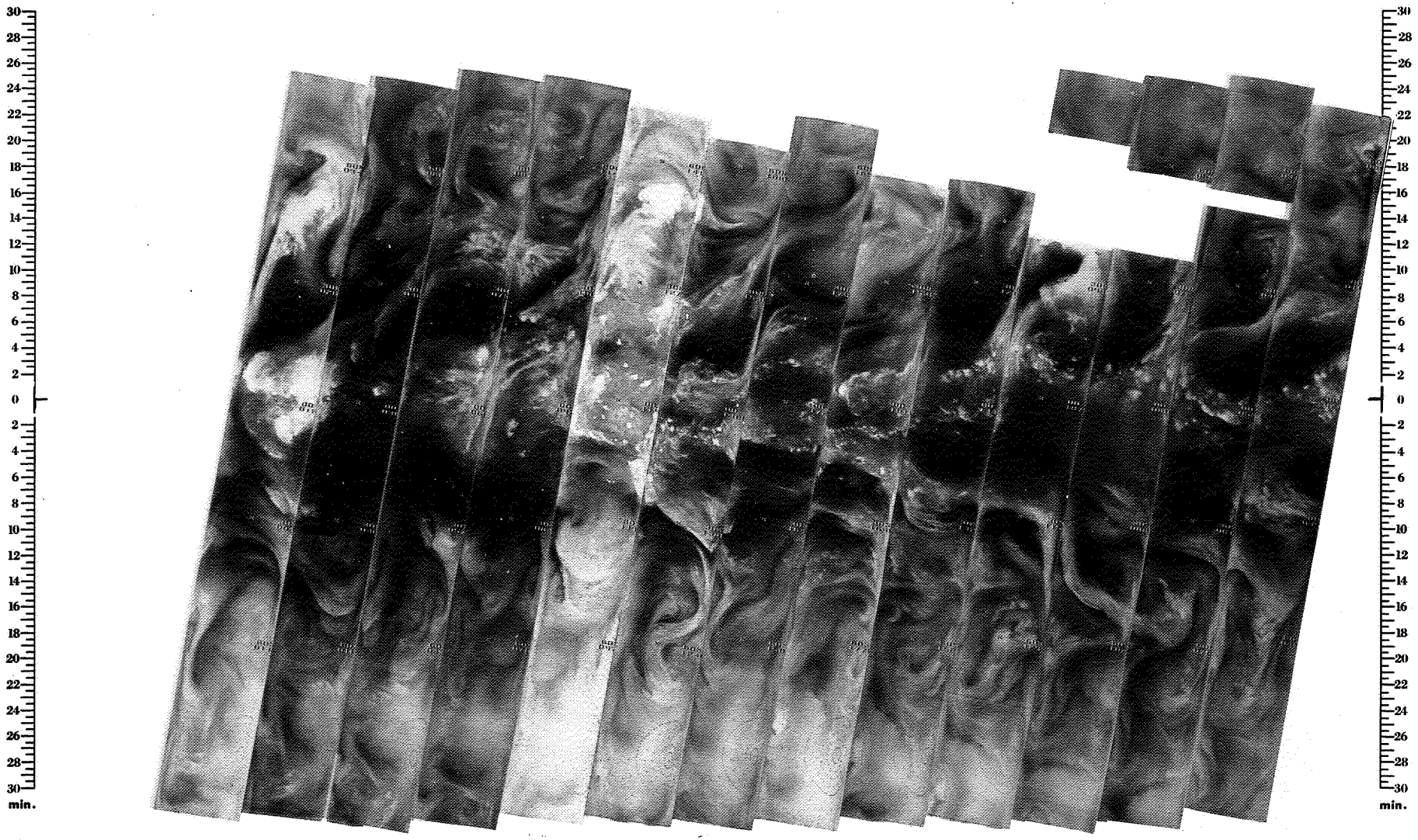

min.
min.
1955 1954 1953 1952 1951 1950 1949 1948 1947 1946 1945 1944 1943
5 MAY 1973
11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1955 1954 1953 1952 1951 1950 1949 1948 1947 1946 1945 1944 1943
5 MAY 1973
6.7 μm



6 MAY 1973

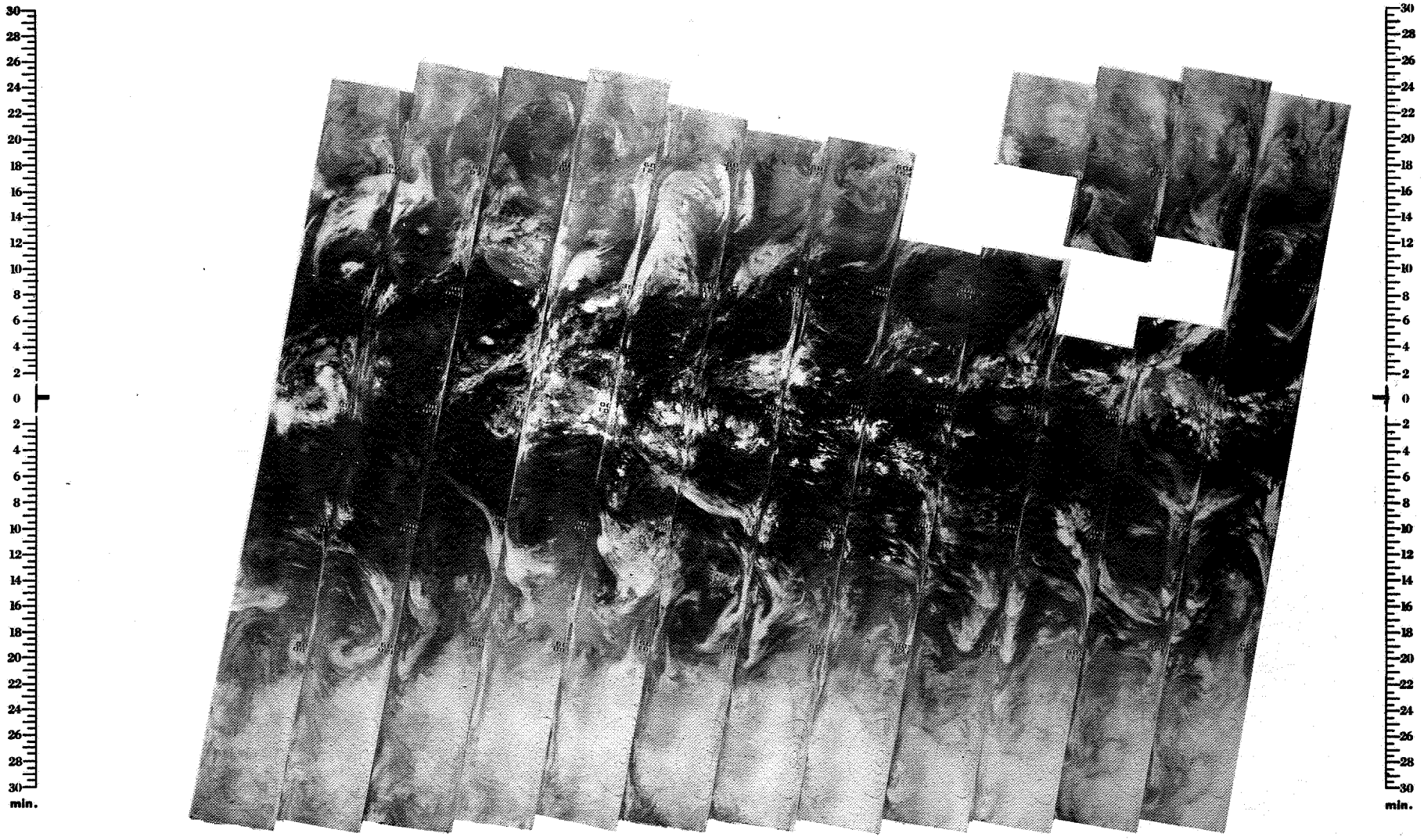
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1969 1968 1967 1966 1965 1964 1963 1962 1961 1960 1959 1958 1957 1956

6 MAY 1973

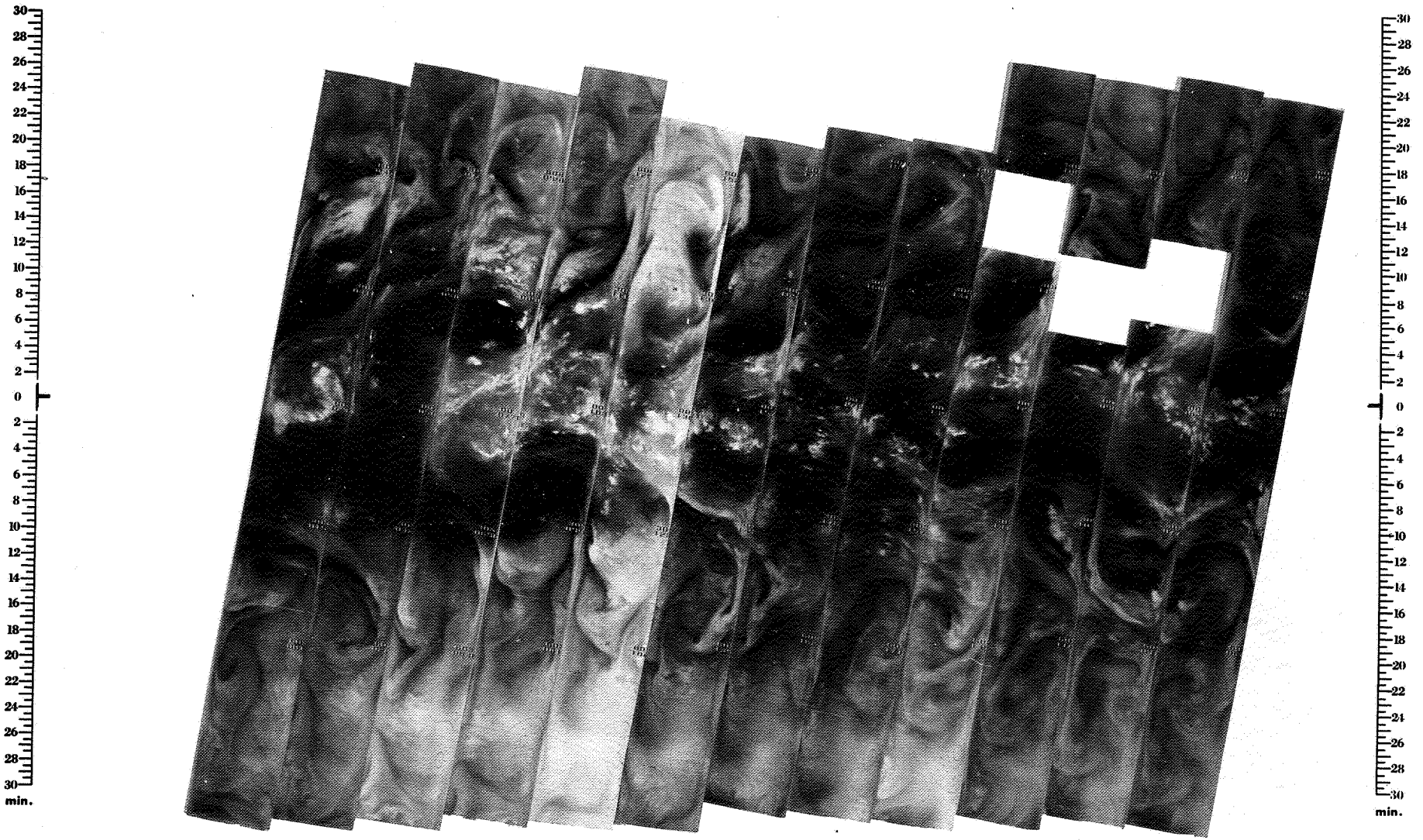
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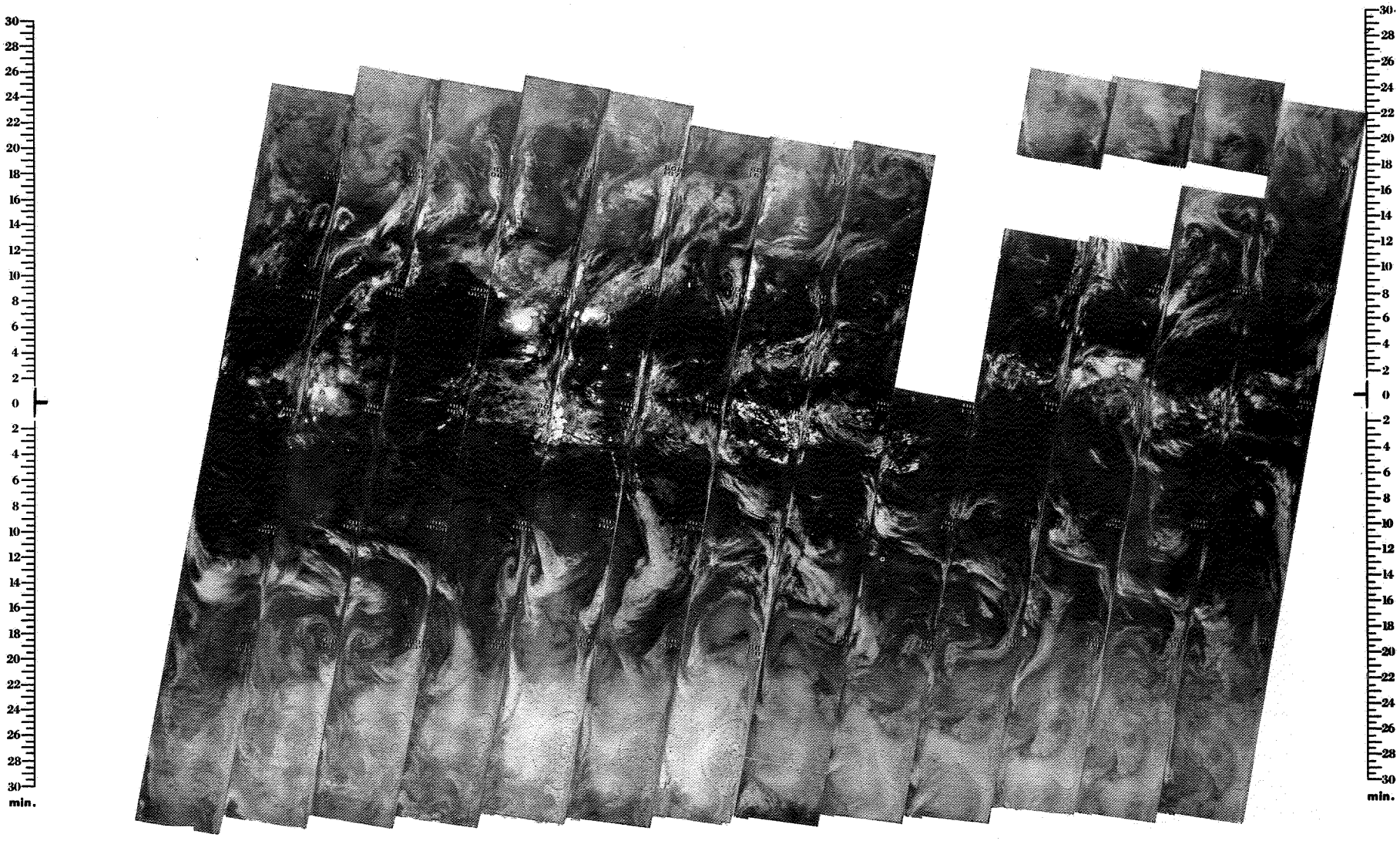


1982 1981 1980 1979 1978 1977 1976 1975 1974 1973 1972 1971 1970

7 MAY 1973

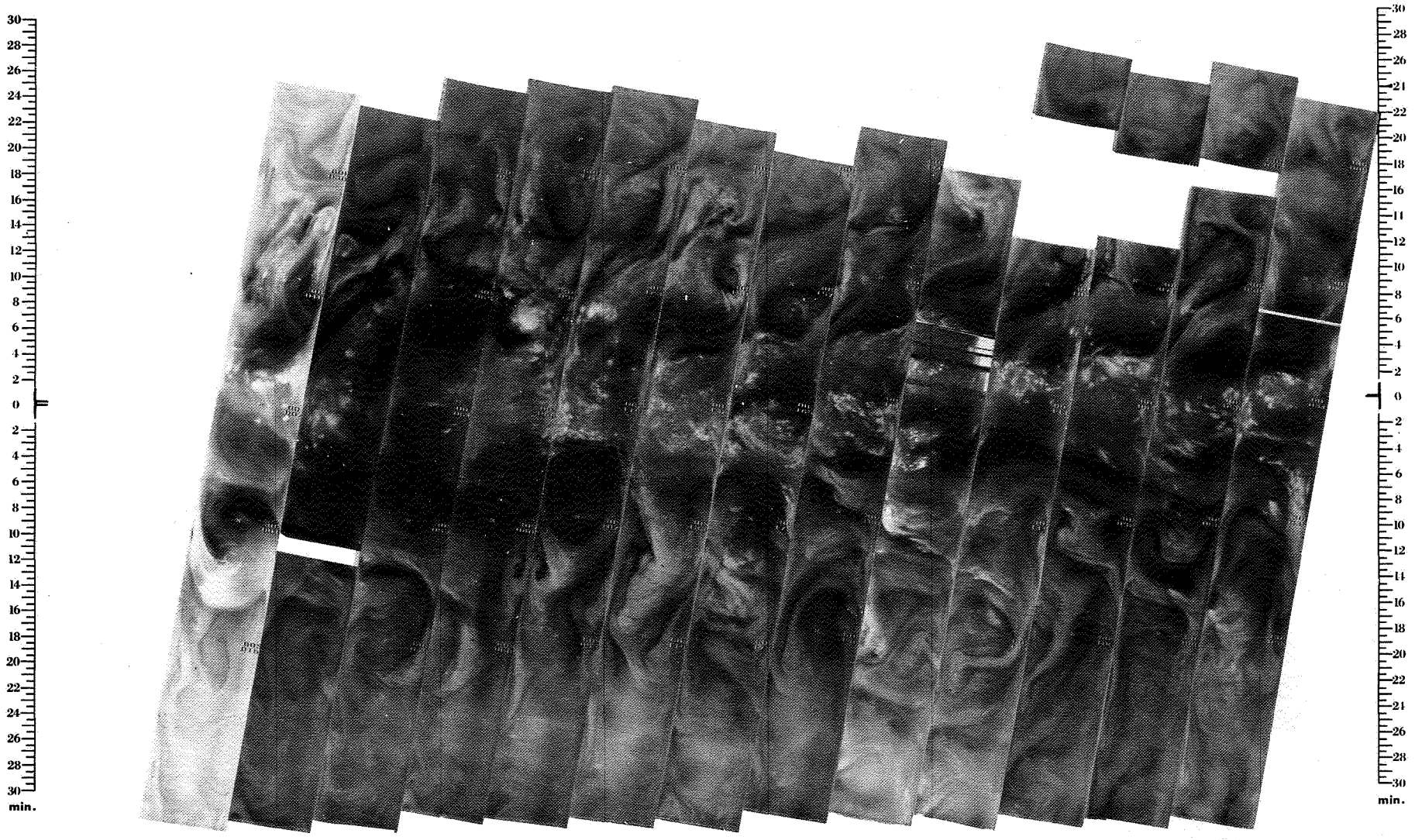
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min.
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min.
1982 1981 1980 1979 1978 1977 1976 1975 1974 1973 1972 1971 1970
7 MAY 1973
6.7 μm



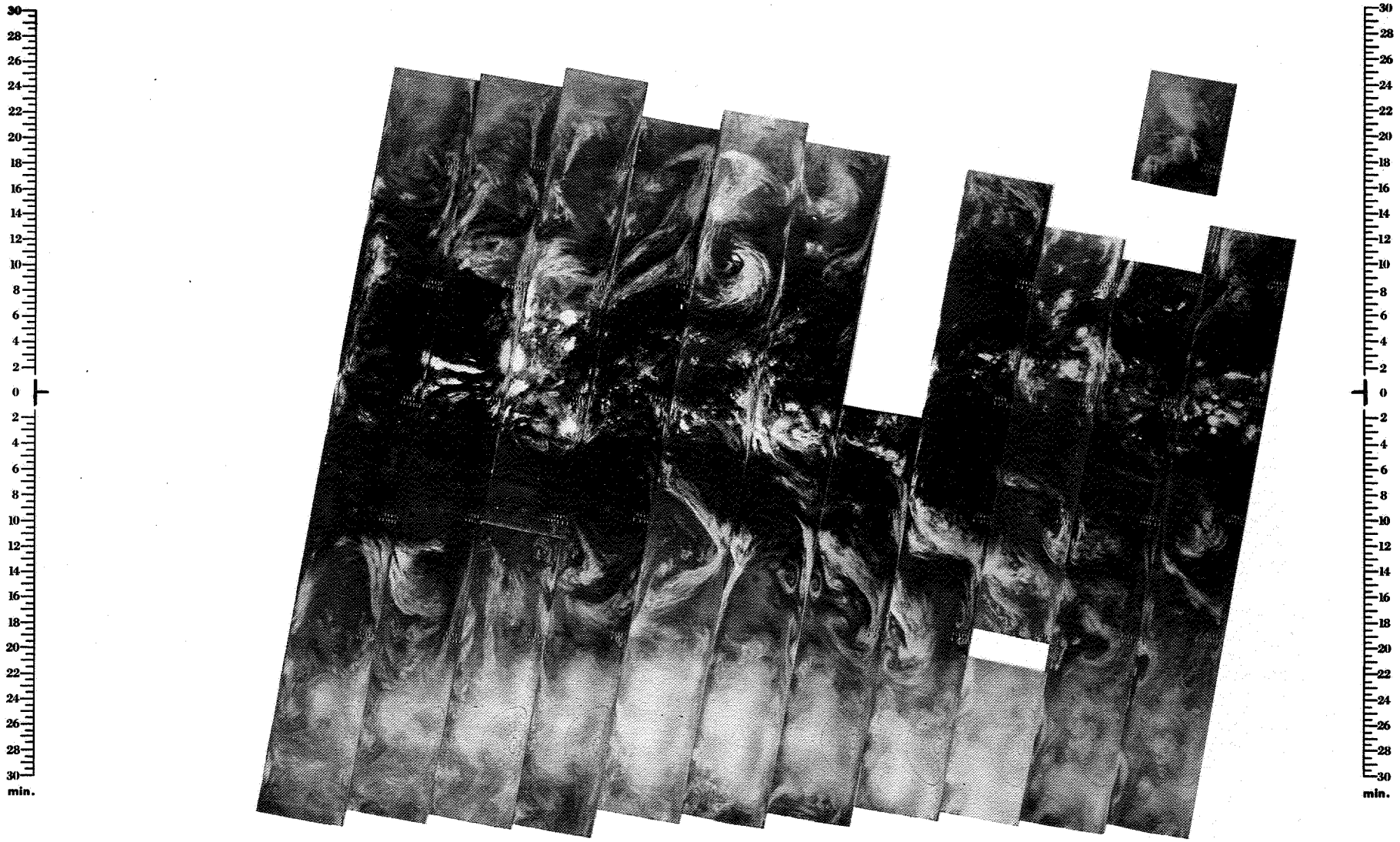
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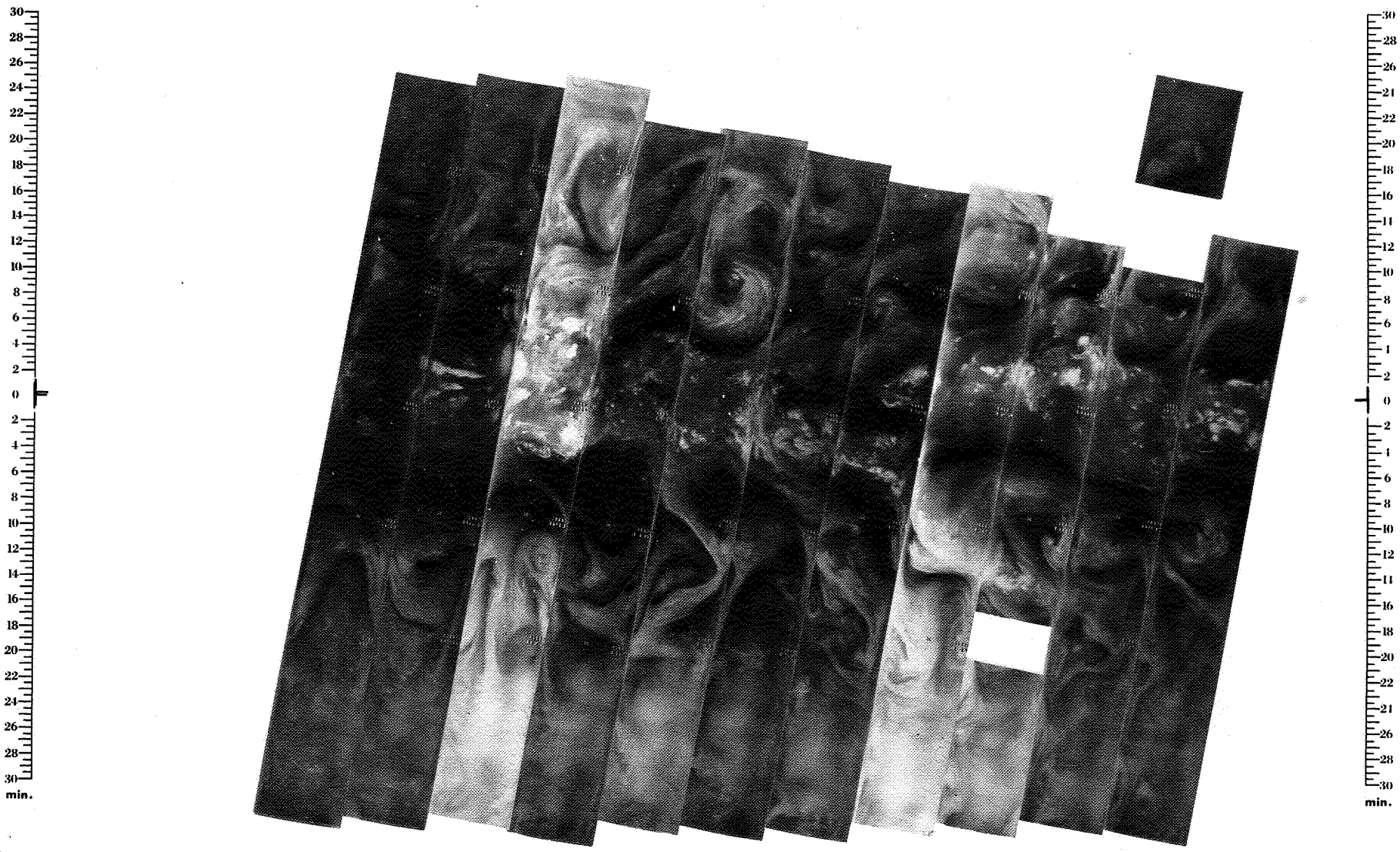
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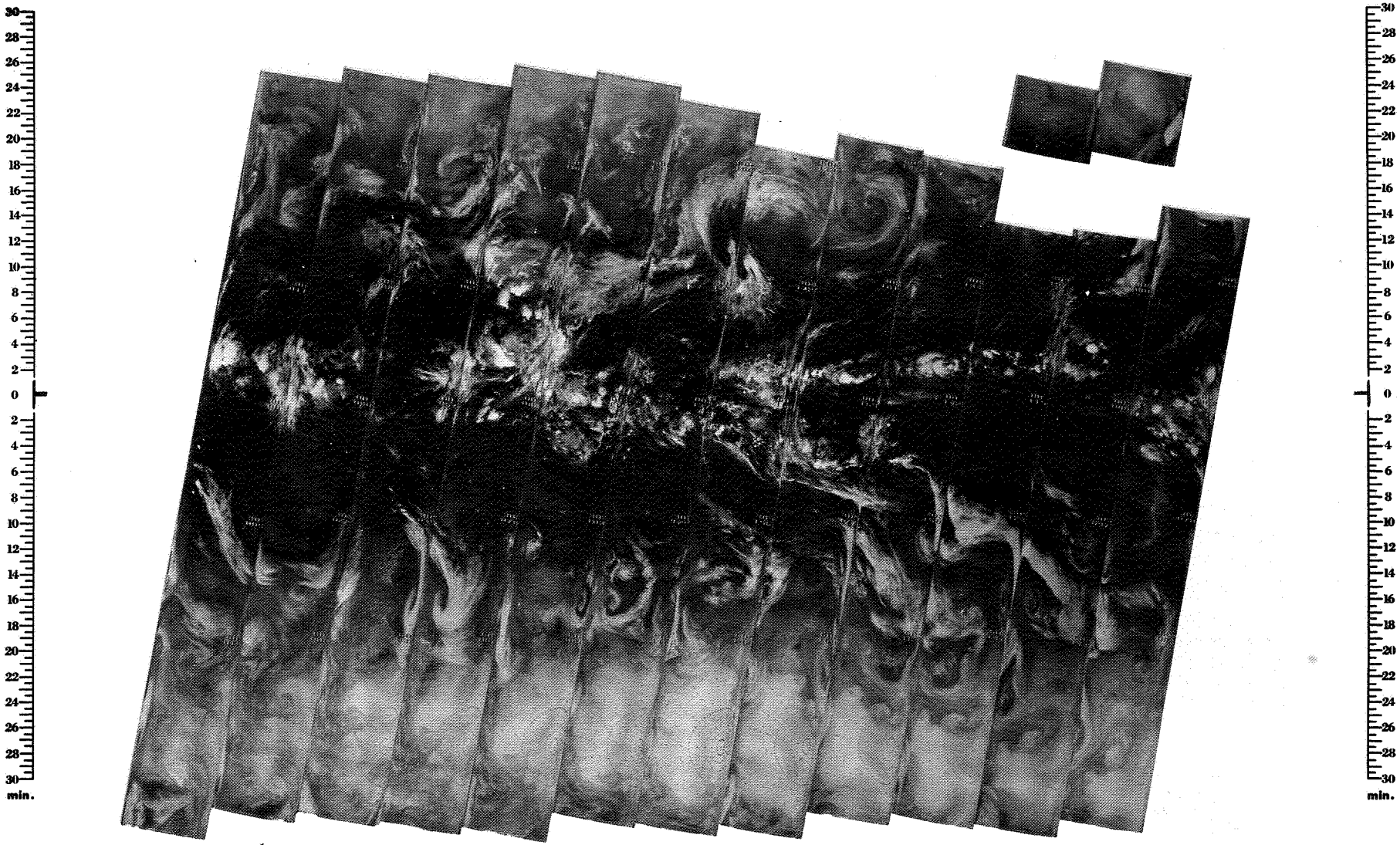
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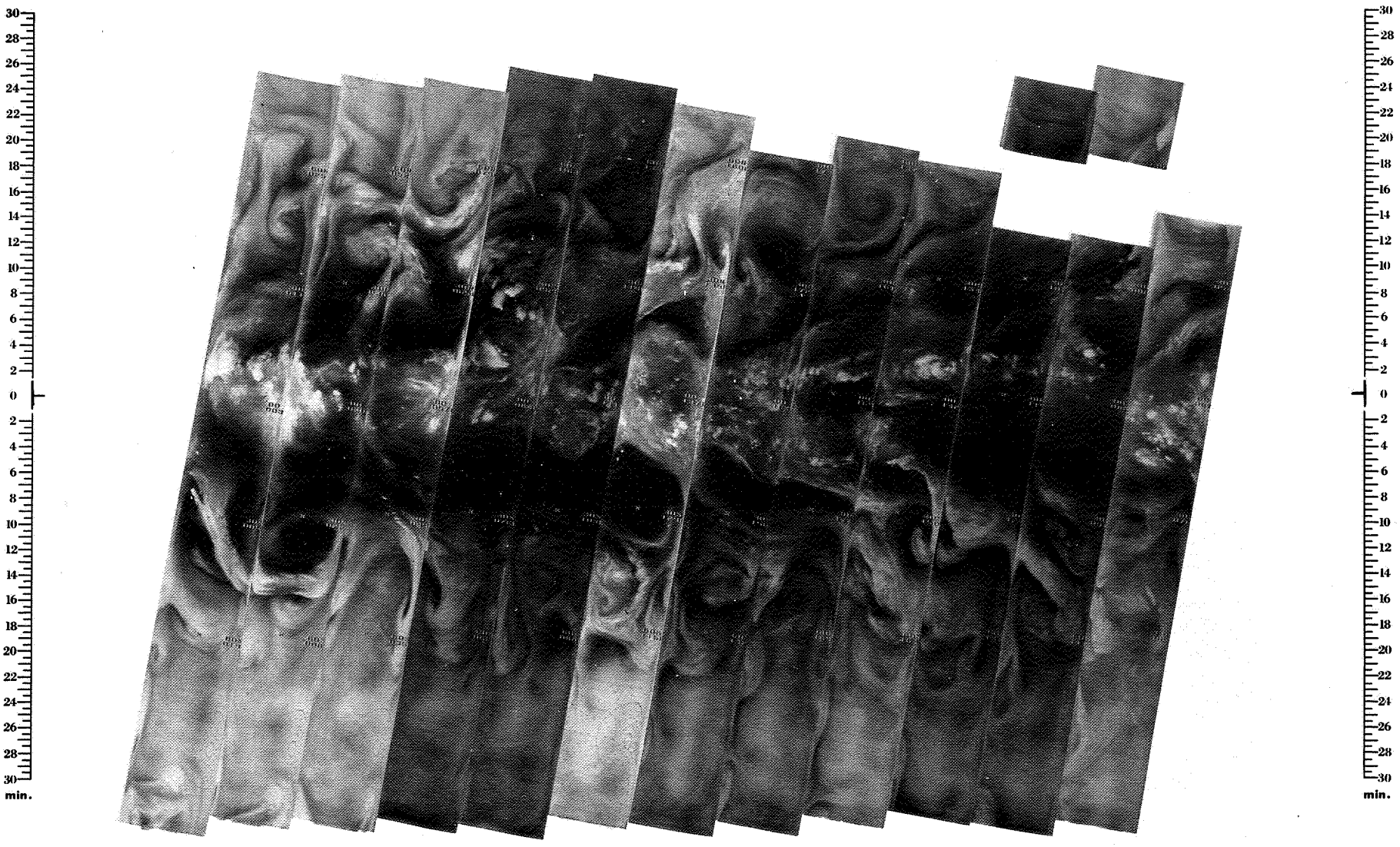

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min.
2009 2008 2007 2006 2005 2004 2003 2002 2001 2000 1999 1998 1997
9 MAY 1973
11.5 μm

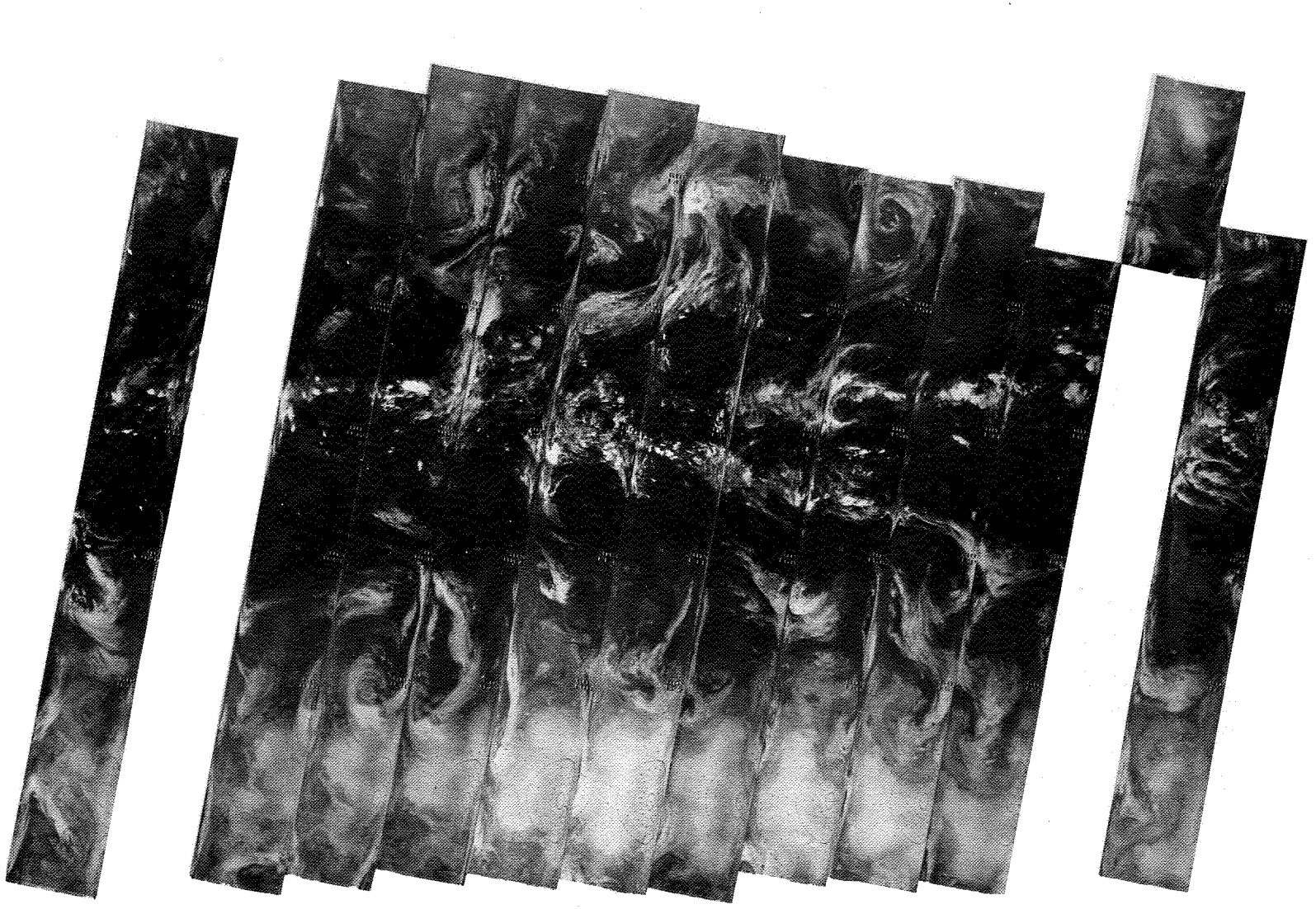


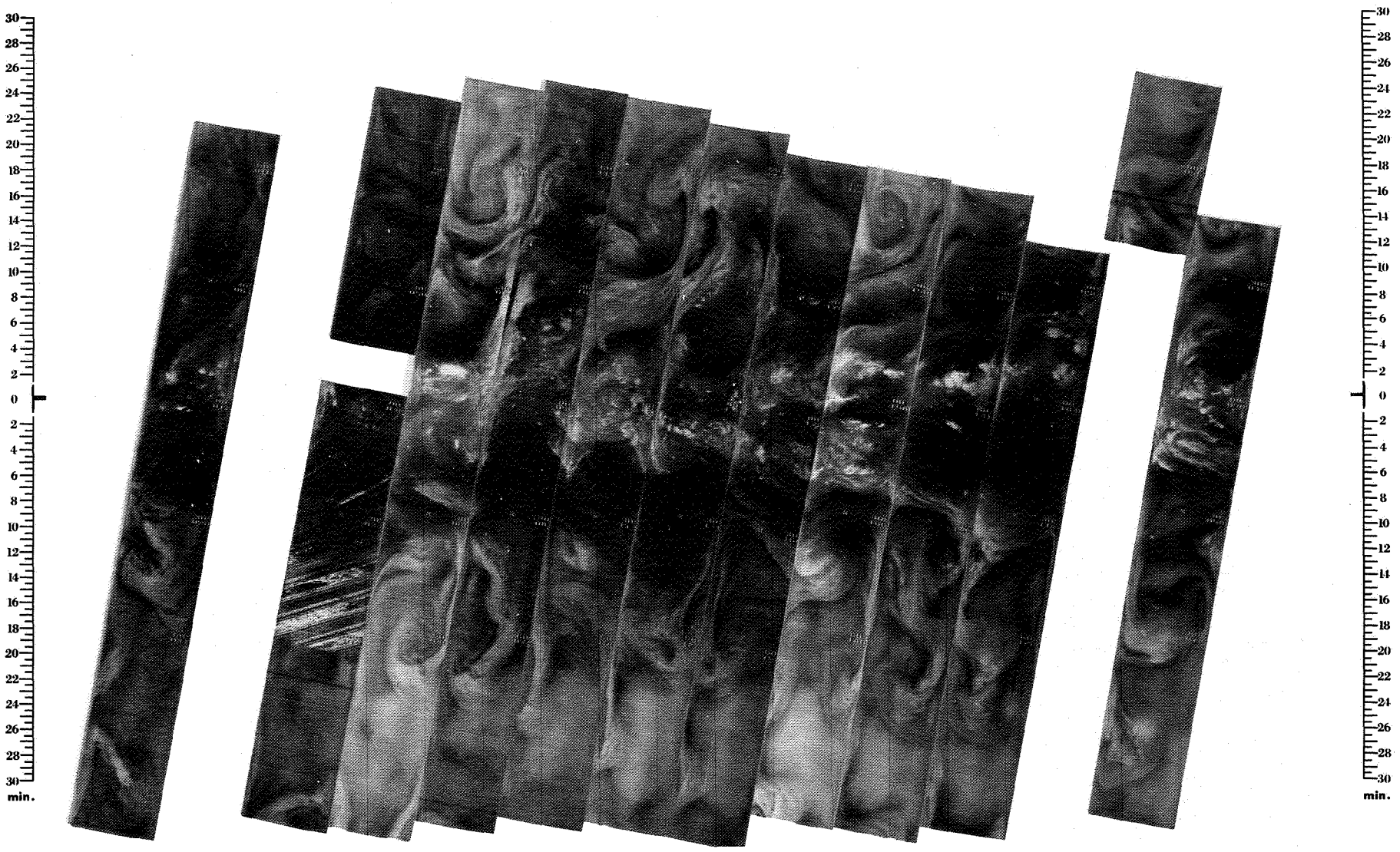
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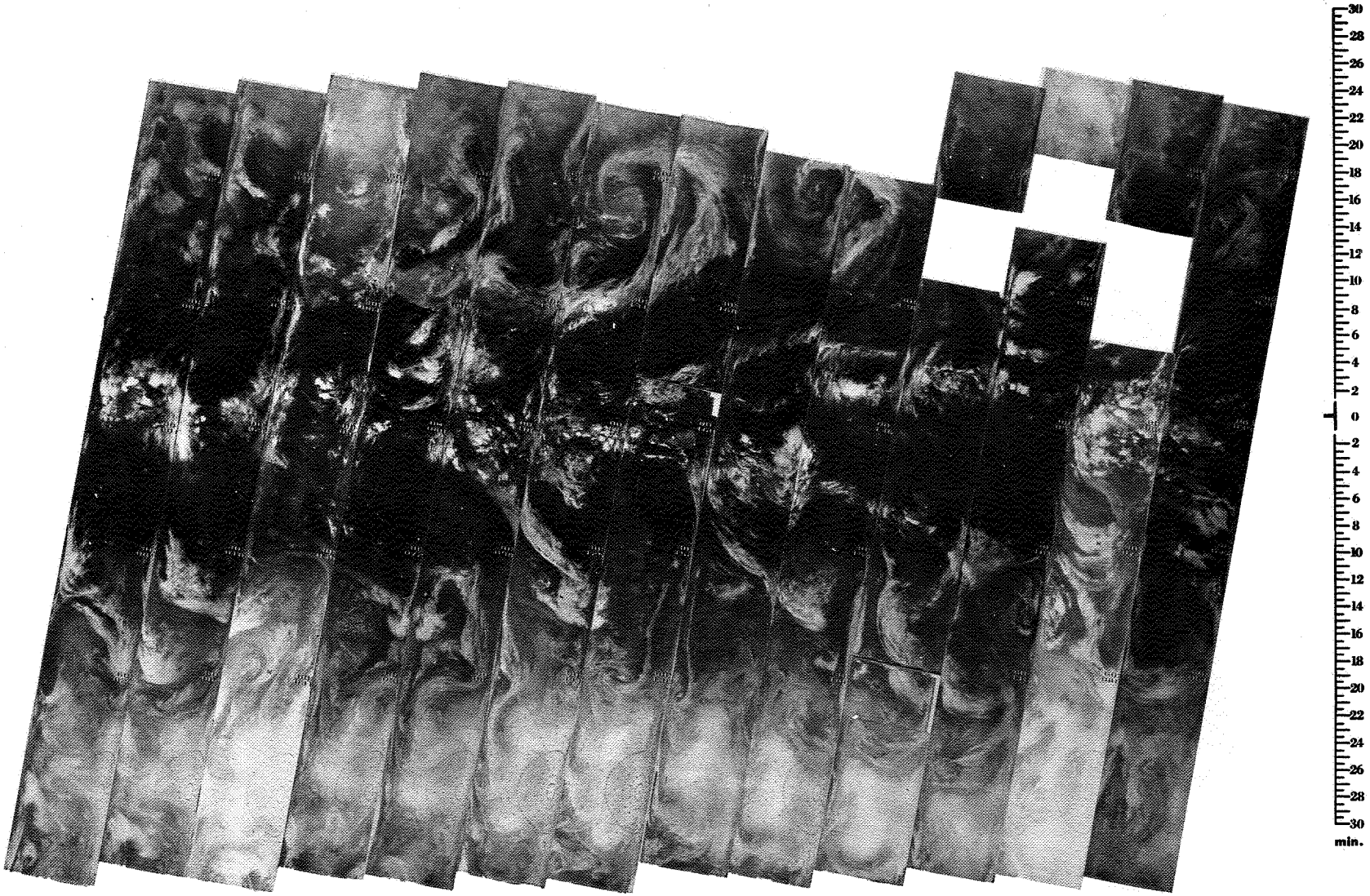
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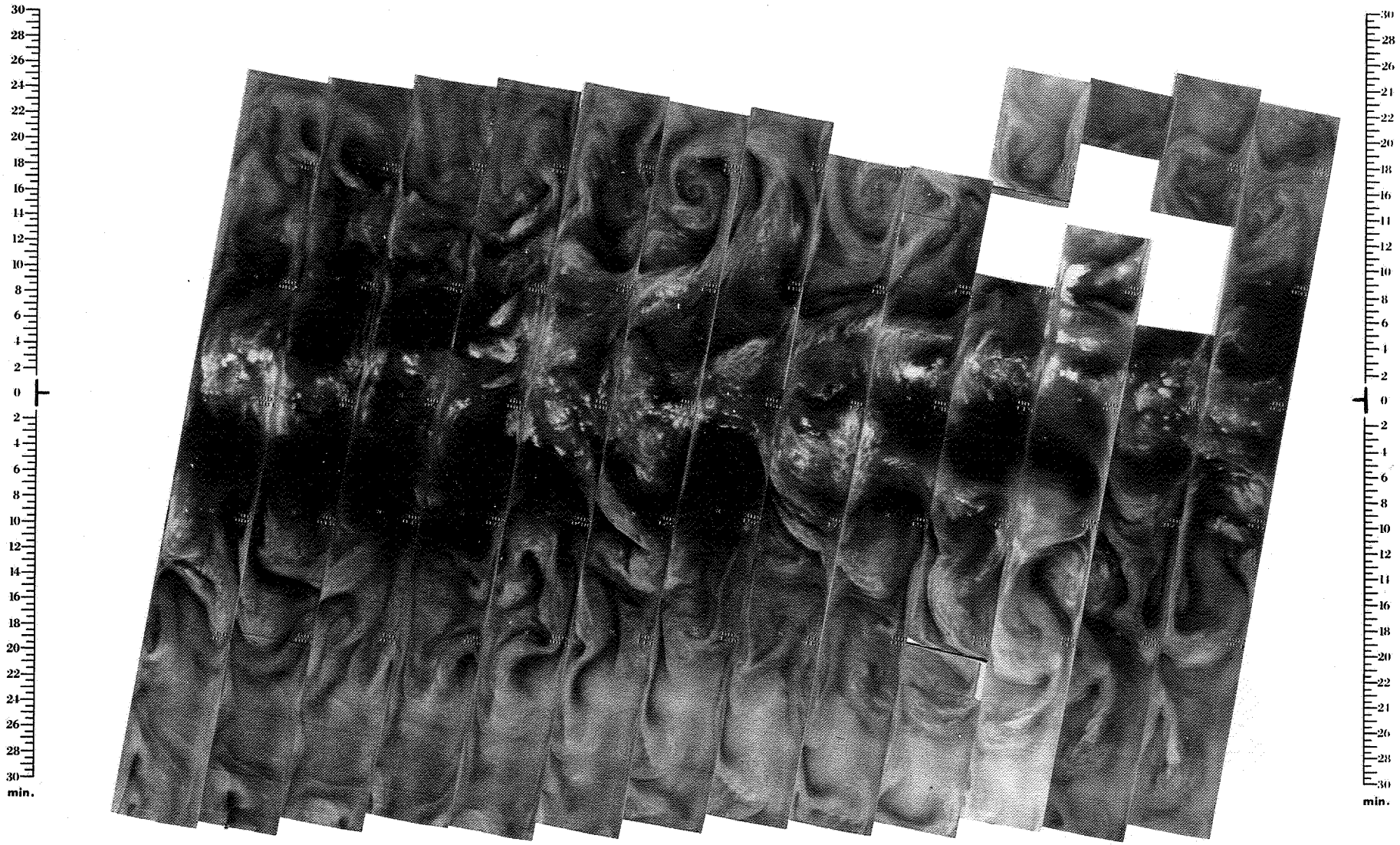

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min.
2022 2021 2020 2019 2018 2017 2016 2015 2014 2013 2012 2011 2010
10 MAY 1973
11.5 μm

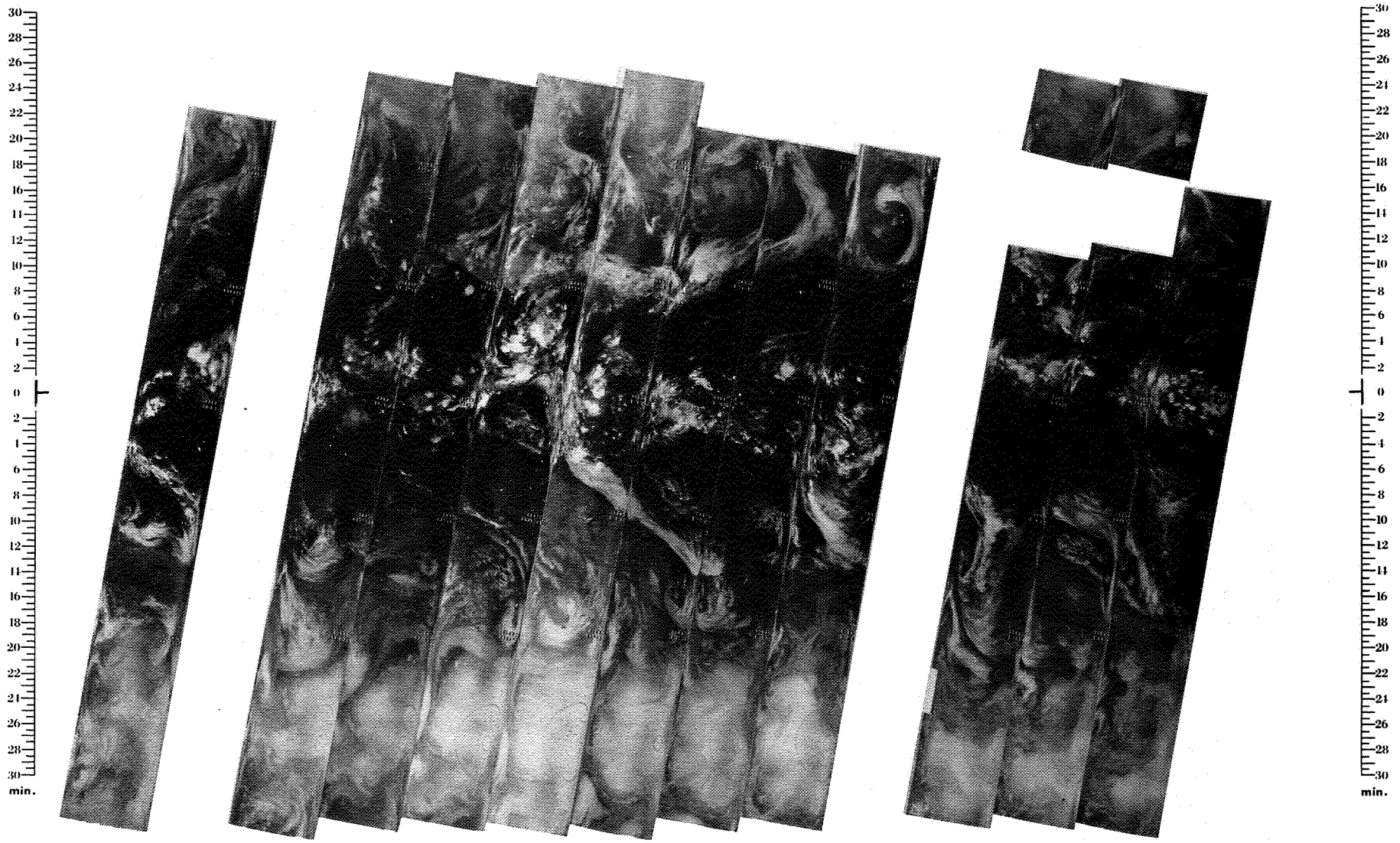

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2022 2021 2020 2019 2018 2017 2016 2015 2014 2013 2012 2011 2010
10 MAY 1973
6.7 μm

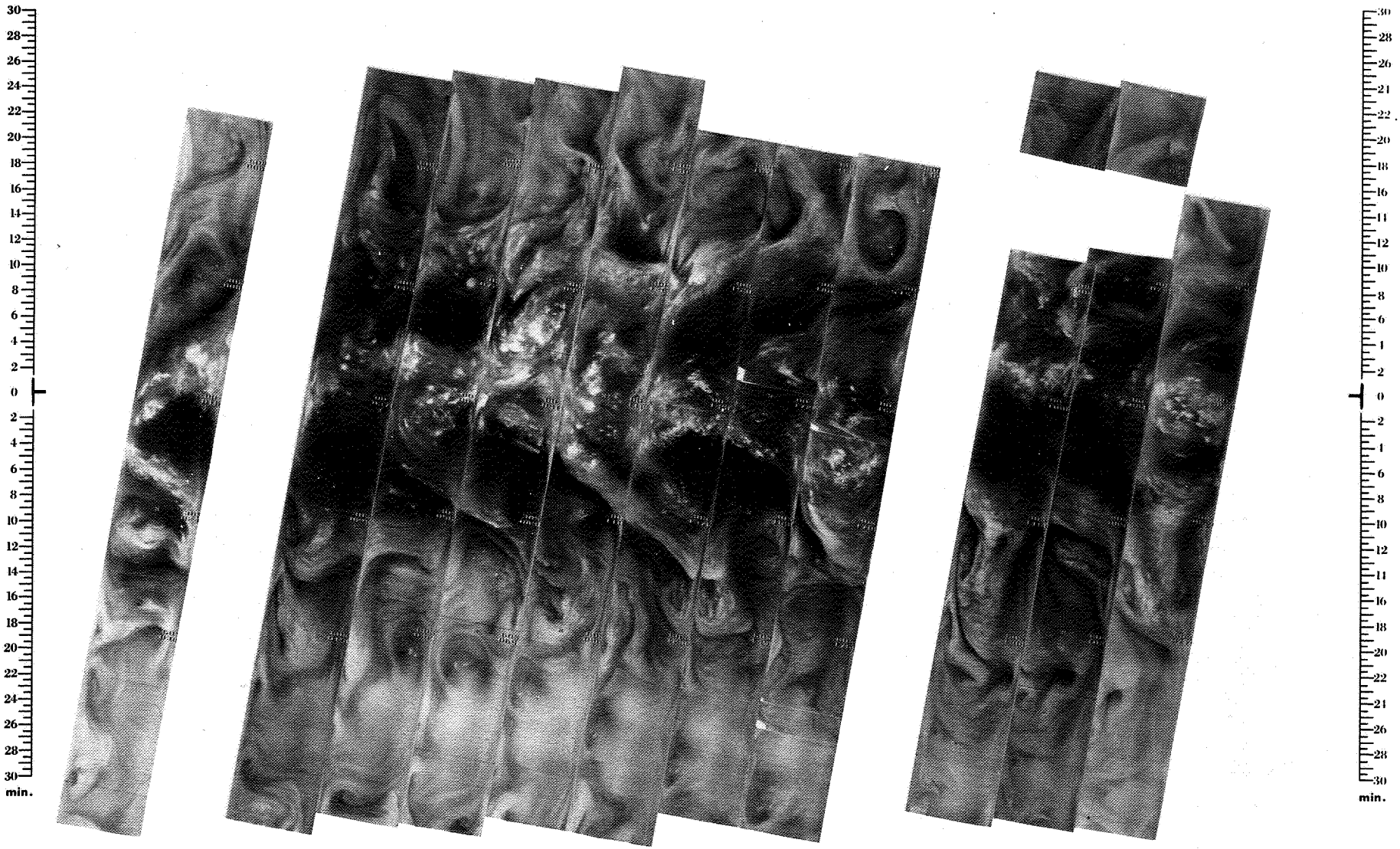

min.
2036
2035
2034
2033
2032
2031
2030
2029
2028
2027
2026
2025
2024
2023
11 MAY 1973
11.5 μm

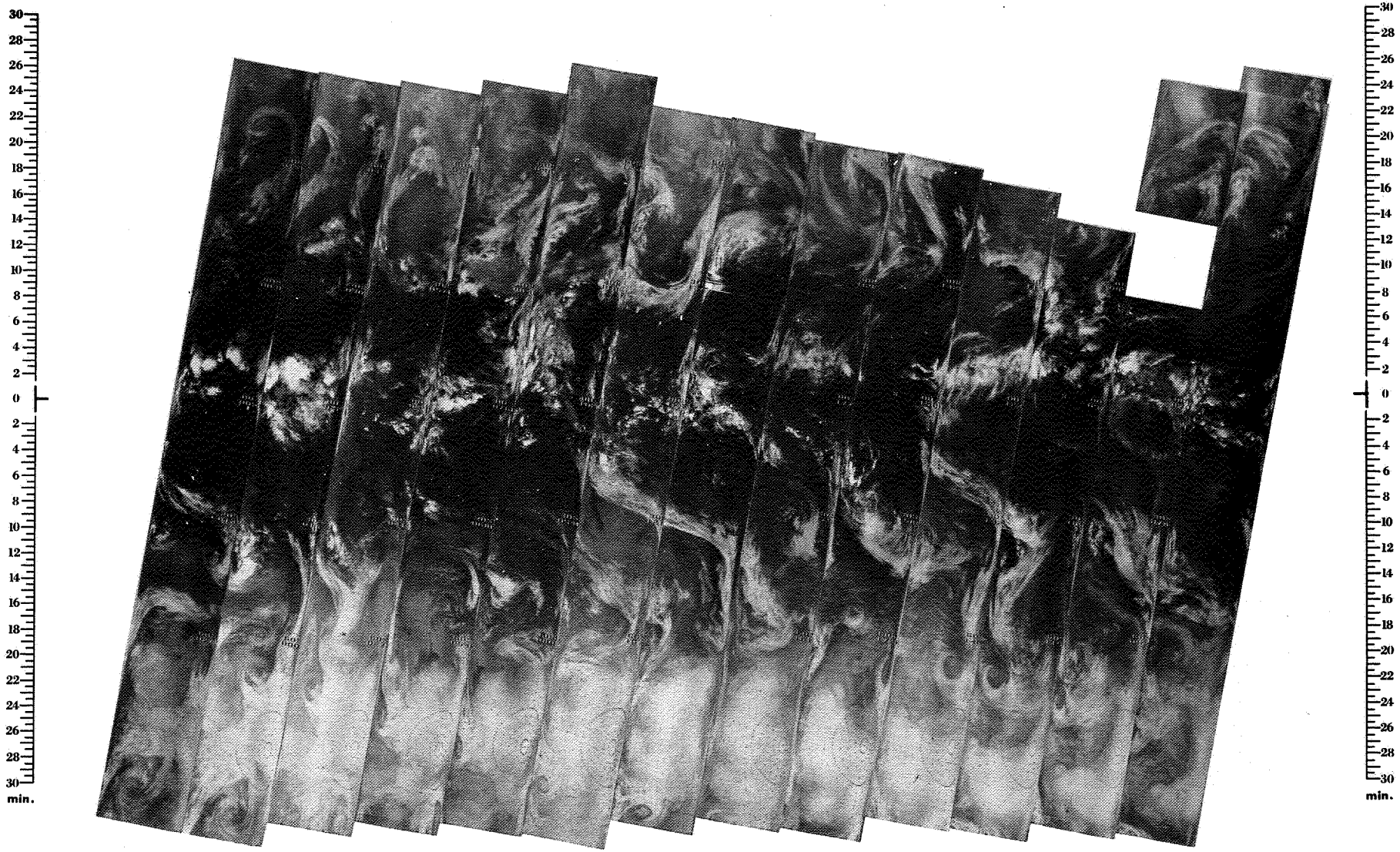

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2036 2035 2034 2033 2032 2031 2030 2029 2028 2027 2026 2025 2024 2023
11 MAY 1973
6.7 μm

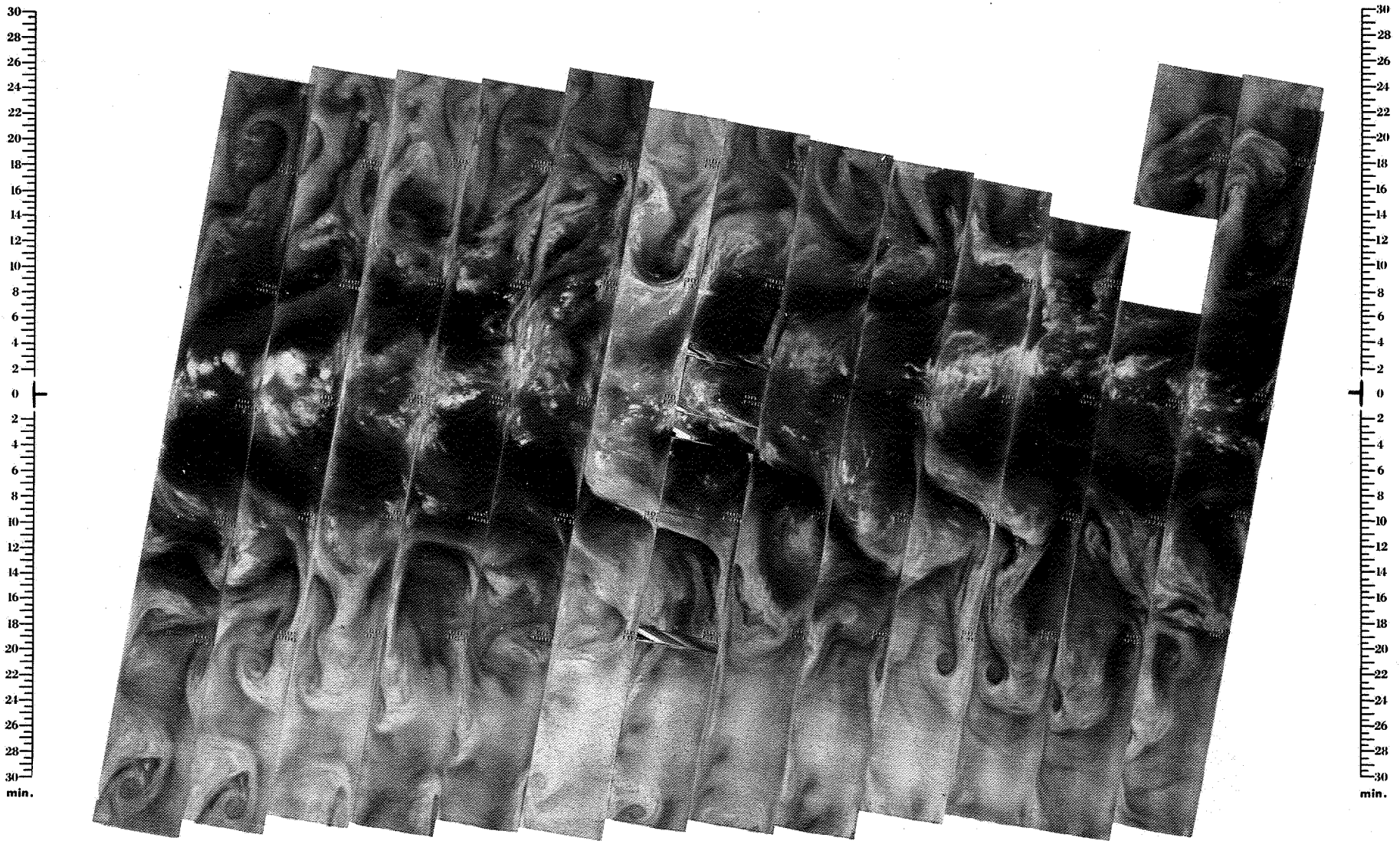

min.
min.
2049
2048
2047
2046
2045
2044
2043
2042
2041
2040
2039
2038
2037
12 MAY 1973
11.5 μm

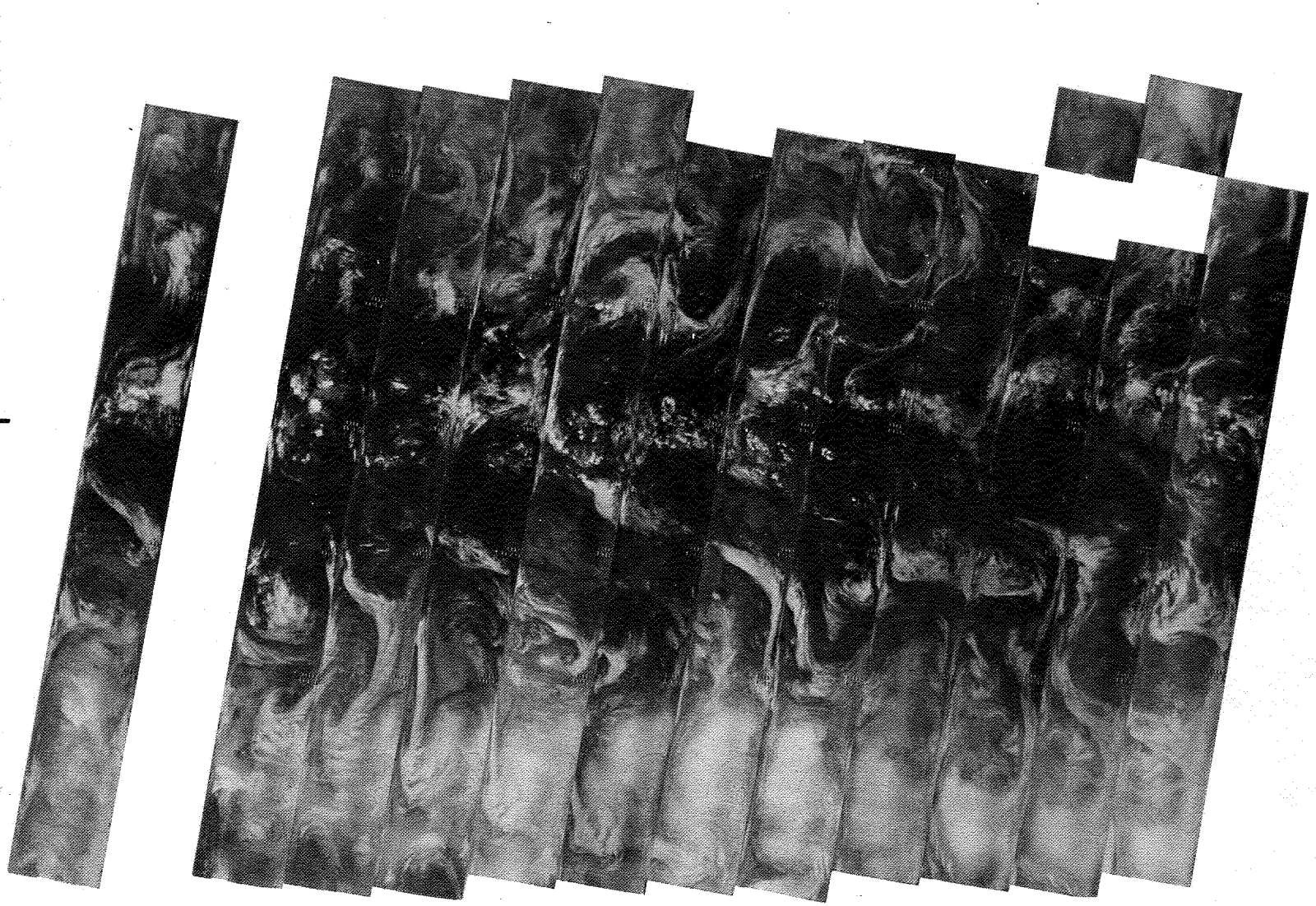

min.
min.
2049 2048 2047 2046 2045 2044 2043 2042 2041 2040 2039 2038 2037
12 MAY 1973
6.7 μm


min.
min.
2063
2062
2061
2060
2059
2058
2057
2056
2055
2054
2053
2052
2051
2050
13 MAY 1973
11.5 μm


min.
min.
2063 2062 2061 2060 2059 2058 2057 2056 2055 2054 2053 2052 2051 2050
13 MAY 1973
6.7 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2076 2075 2074 2073 2072 2071 2070 2069 2068 2067 2066 2065 2064
14 MAY 1973
11.5 μm

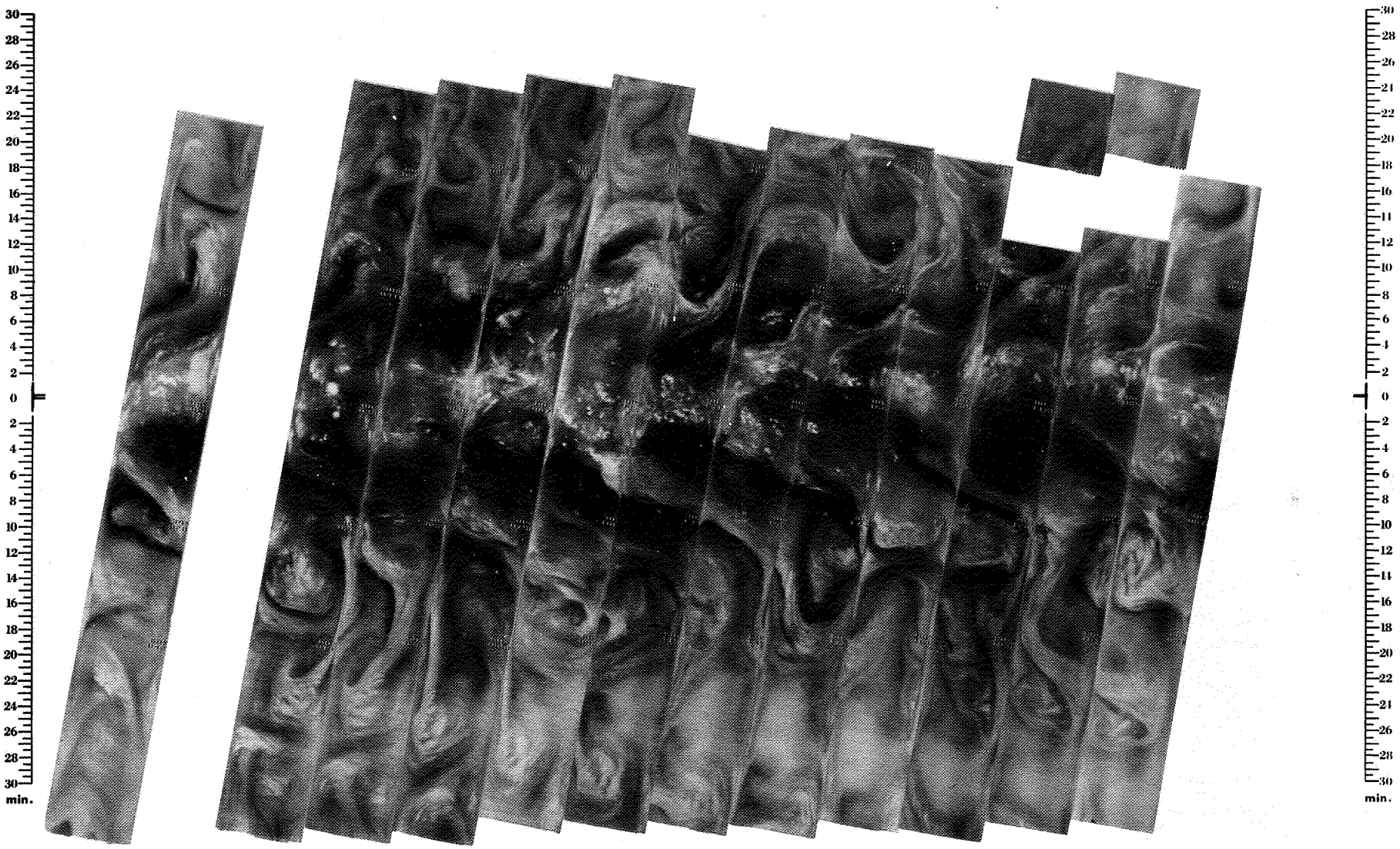

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2076 2075 2074 2073 2072 2071 2070 2069 2068 2067 2066 2065 2064
14 MAY 1973
6.7 μm



2090 2089 2088 2087 2086 2085 2084 2083 2082 2081 2080 2079 2078 2077

15 MAY 1973

11.5 μm

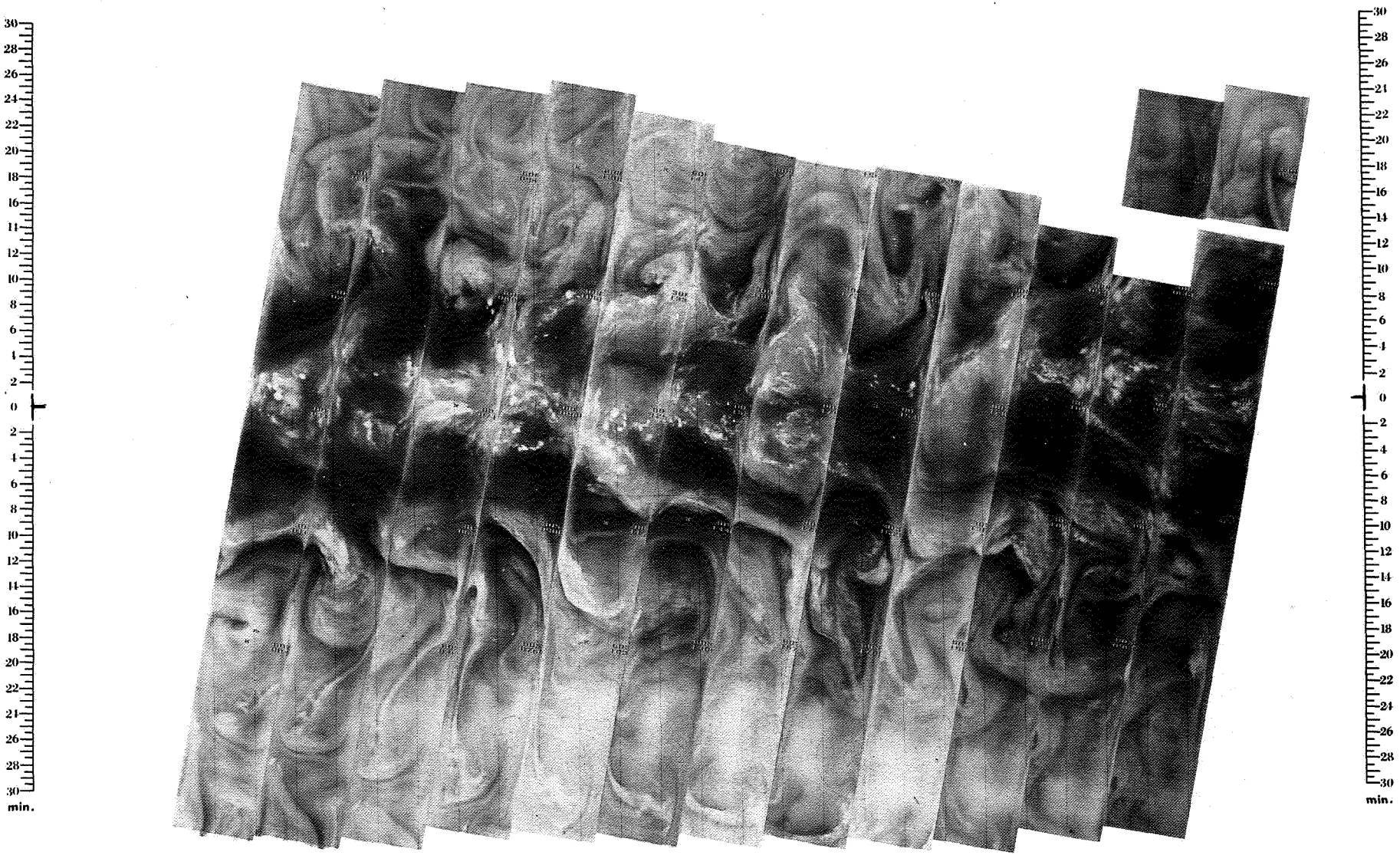

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2090 2089 2088 2087 2086 2085 2084 2083 2082 2081 2080 2079 2078 2077
15 MAY 1973
6.7 μm



2103 2102 2101 2100 2099 2098 2097 2096 2095 2094 2093 2092 2091

16 MAY 1973

11.5 μm

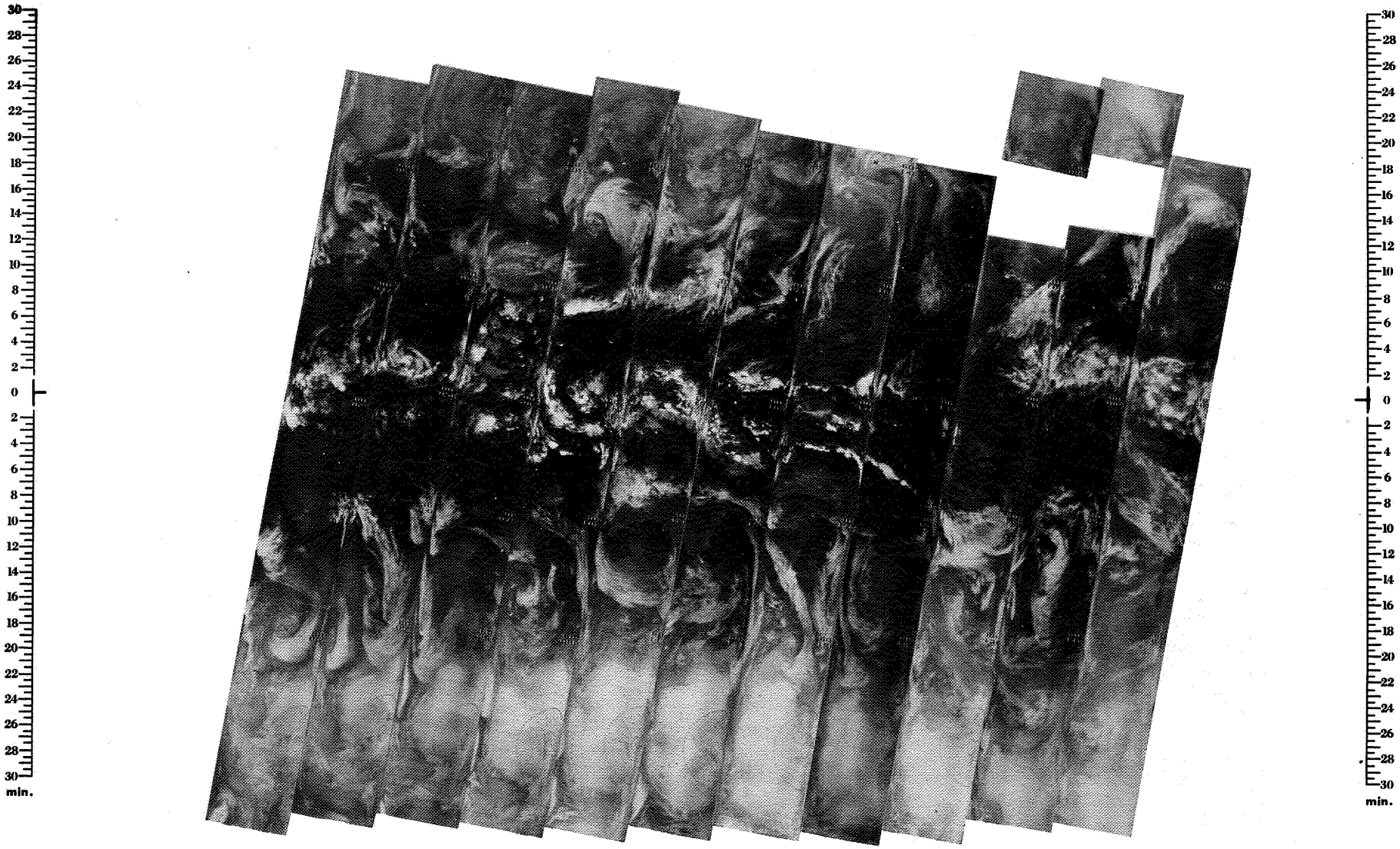


4-95

2103 2102 2101 2100 2099 2098 2097 2096 2095 2094 2093 2092 2091

16 MAY 1973

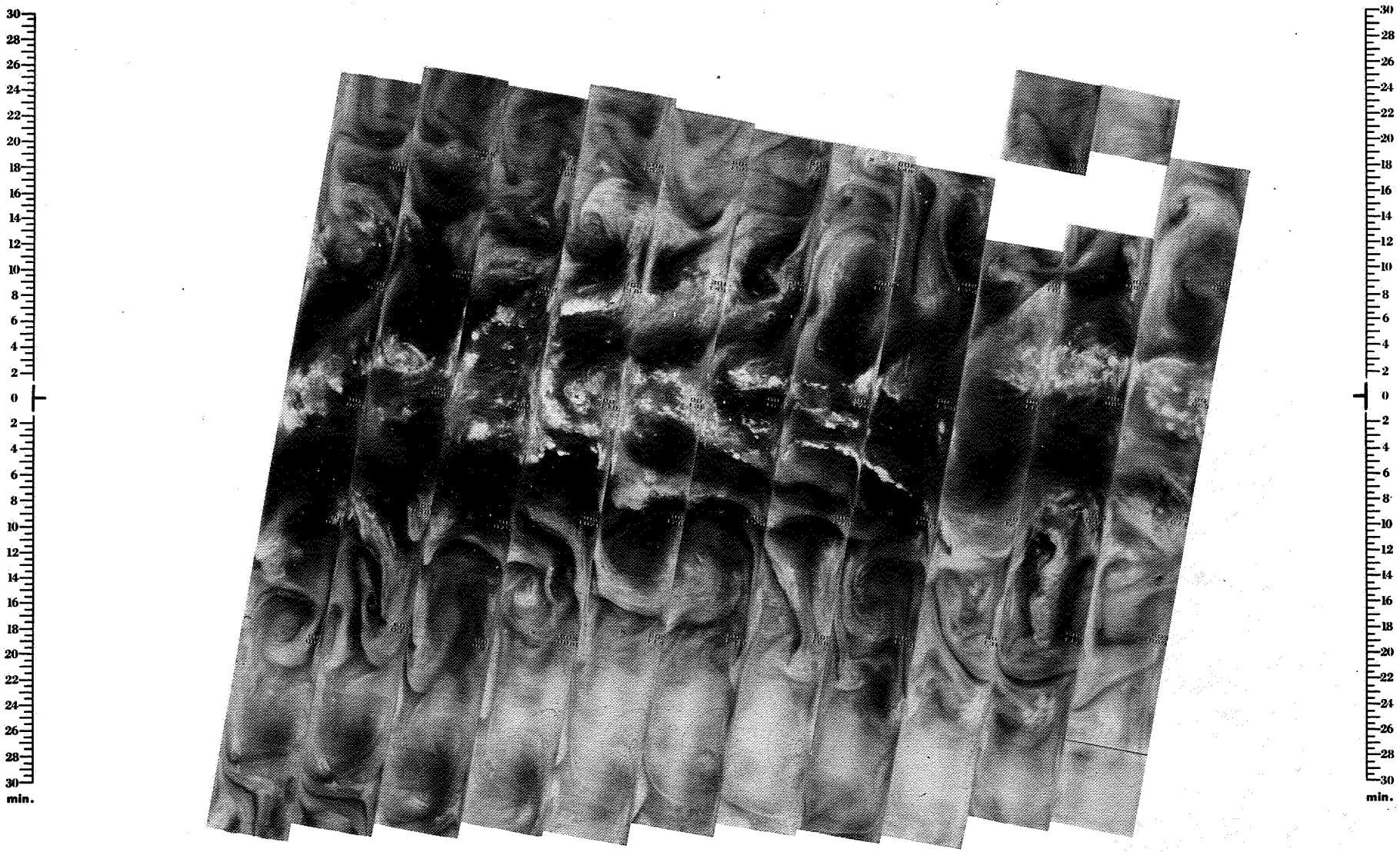
6.7 μm



2116 2115 2114 2113 2112 2111 2110 2109 2108 2107 2106 2105 2104

17 MAY 1973

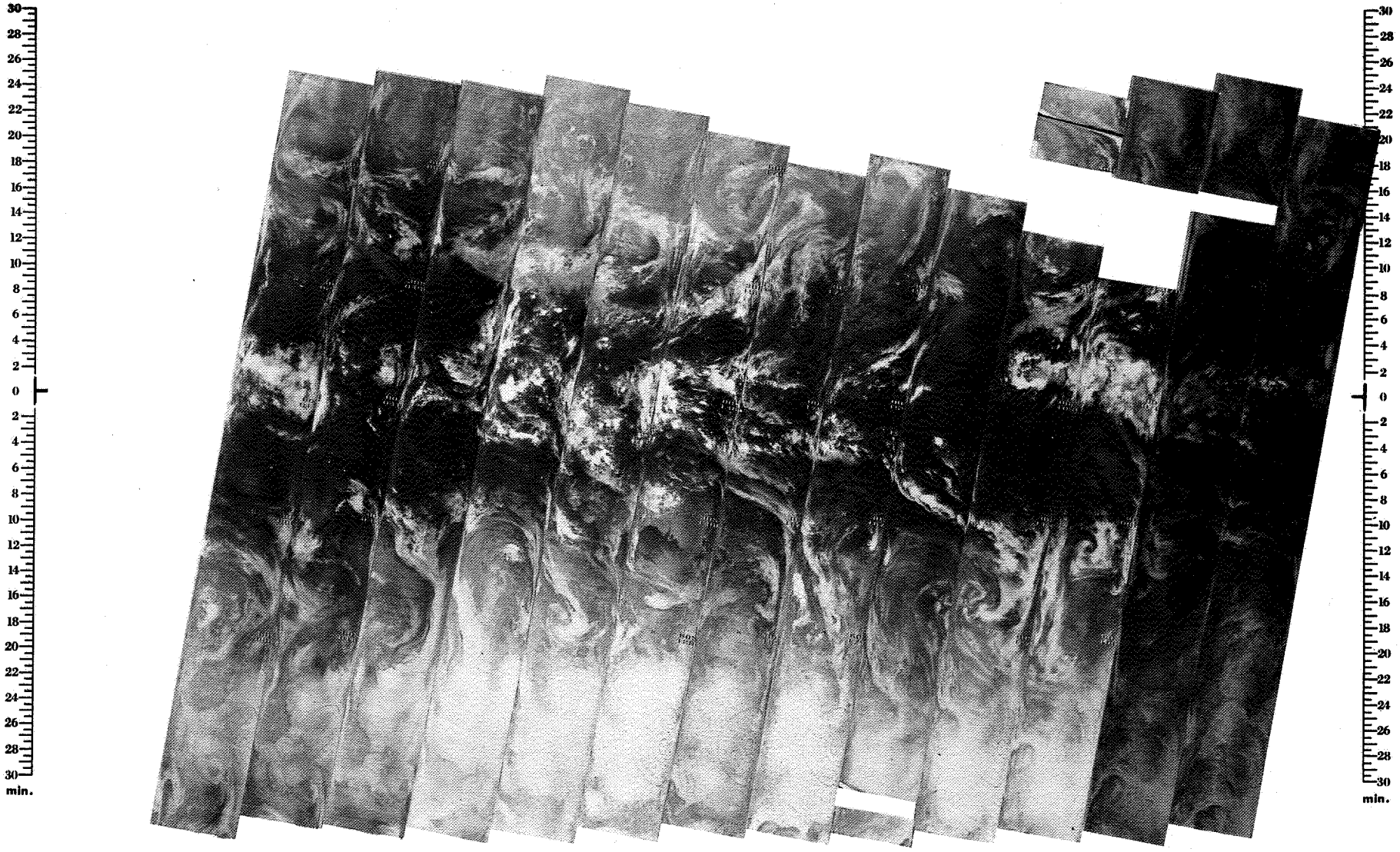
11.5 μm



2116 2115 2114 2113 2112 2111 2110 2109 2108 2107 2106 2105 2104

17 MAY 1973

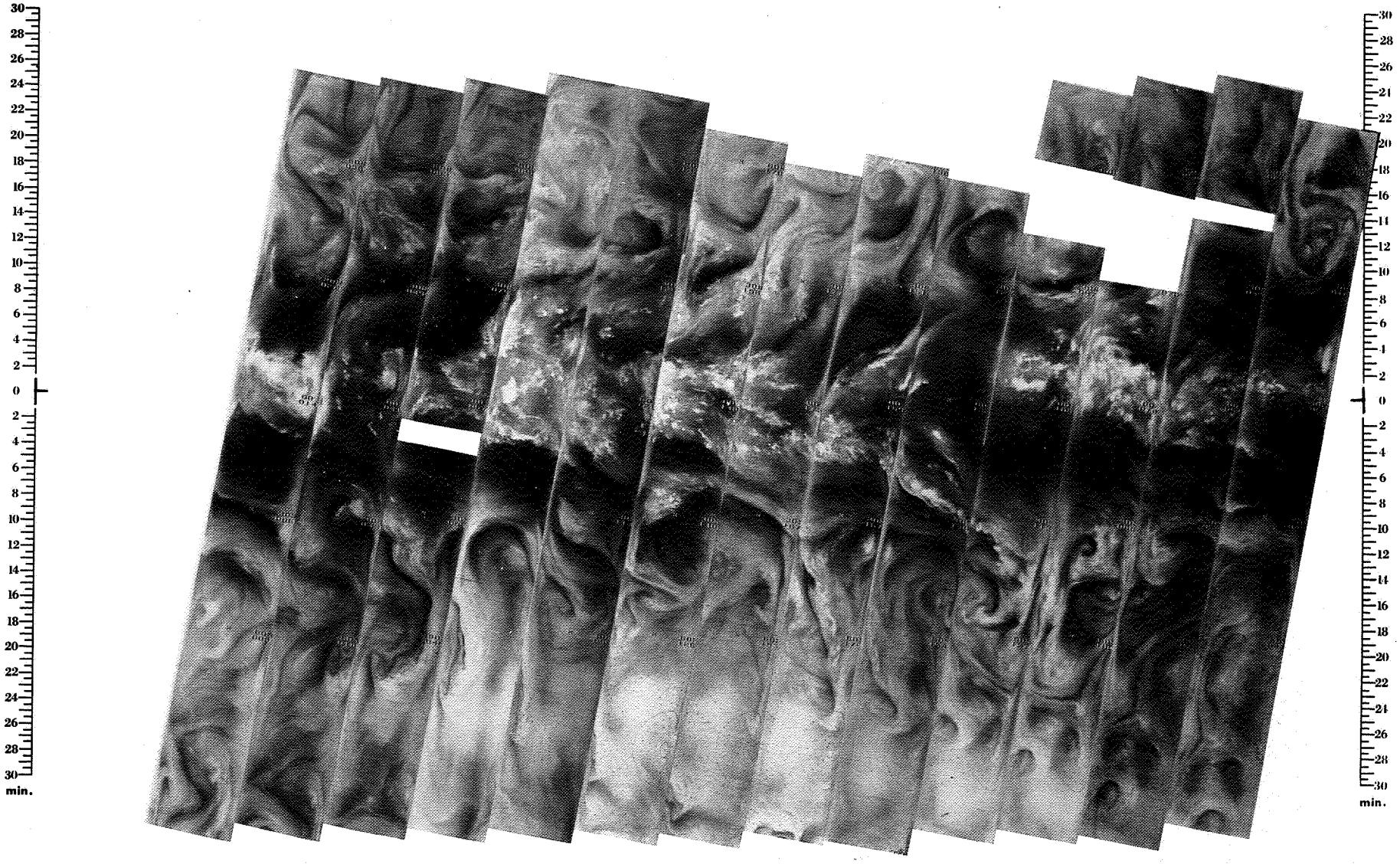
6.7 μm



2130 2129 2128 2127 2126 2125 2124 2123 2122 2121 2120 2119 2118 2117

18 MAY 1973

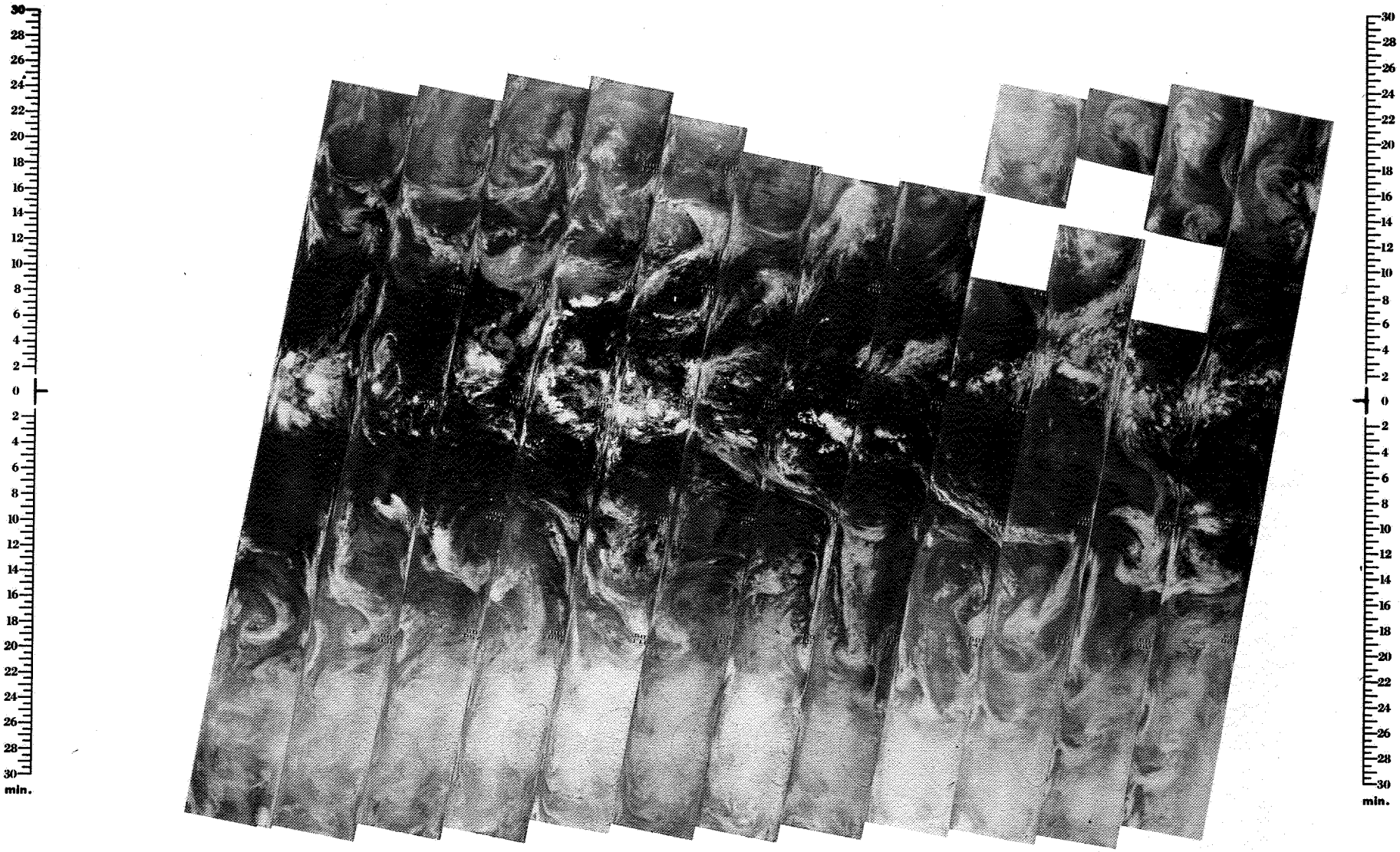
11.5 μm



2130 2129 2128 2127 2126 2125 2124 2123 2122 2121 2120 2119 2118 2117

18 MAY 1973

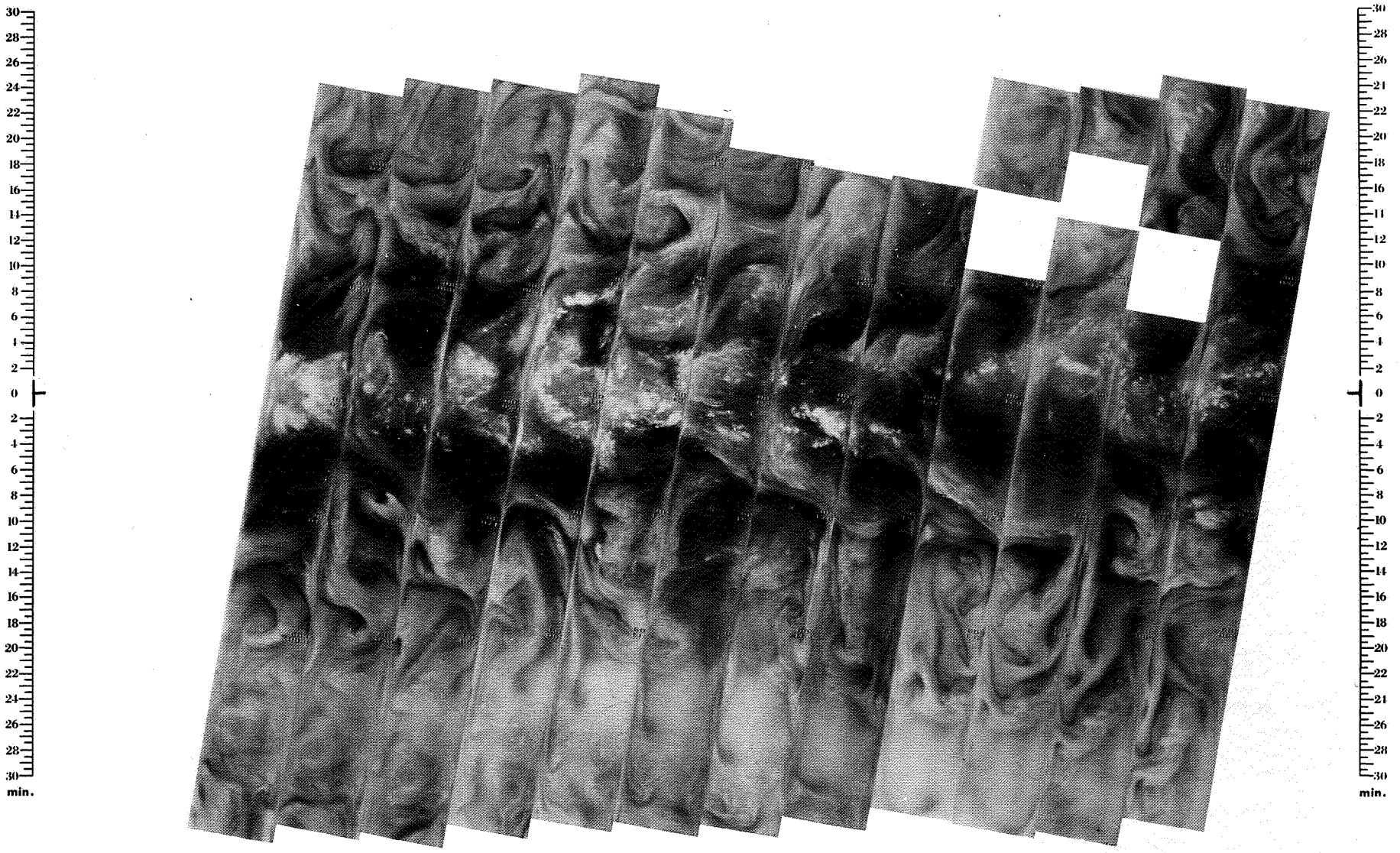
6.7 μm



2143 2142 2141 2140 2139 2138 2137 2136 2135 2134 2133 2132 2131

19 MAY 1973

11.5 μm

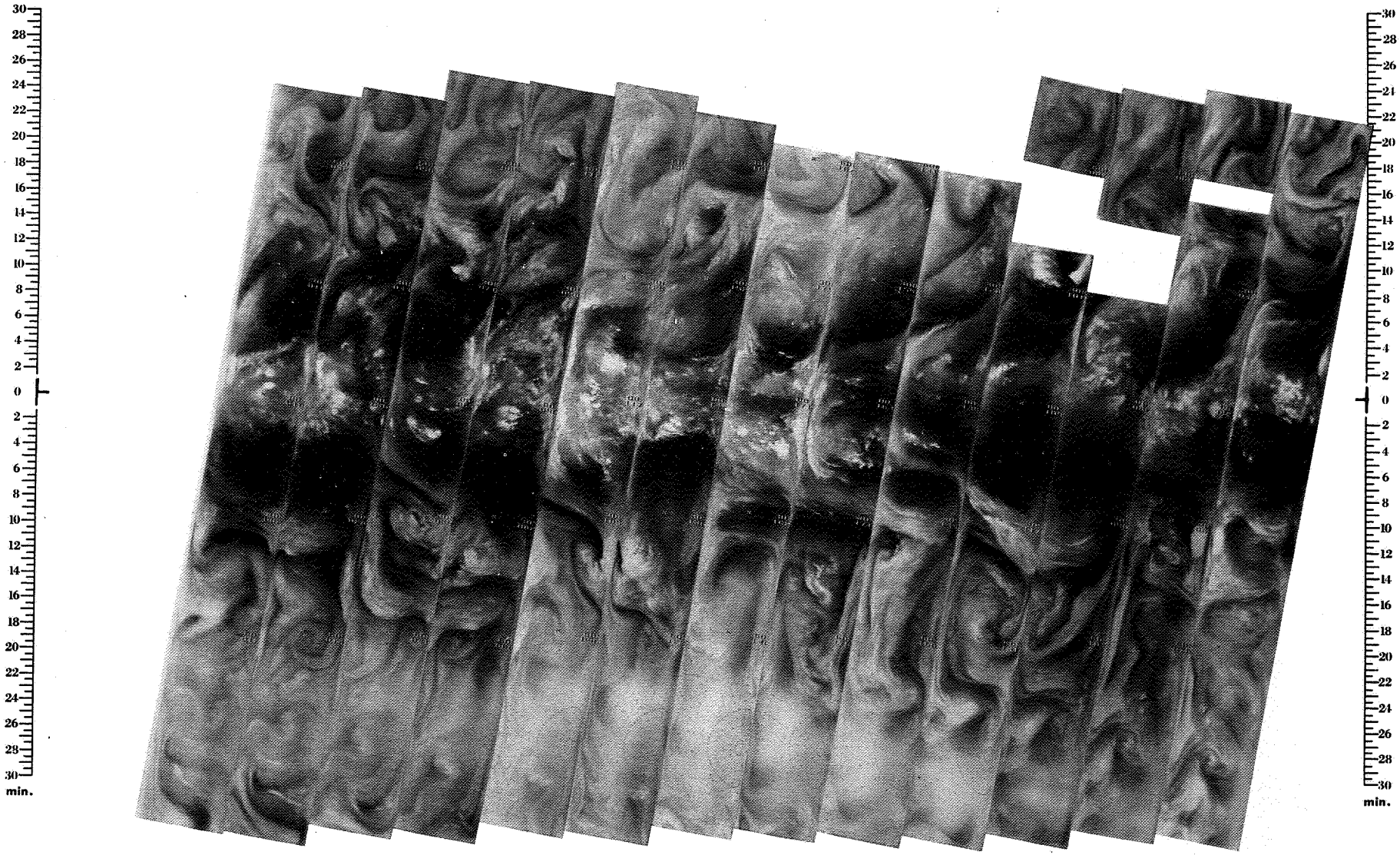


2143 2142 2141 2140 2139 2138 2137 2136 2135 2134 2133 2132 2131

19 MAY 1973

6.7 μm

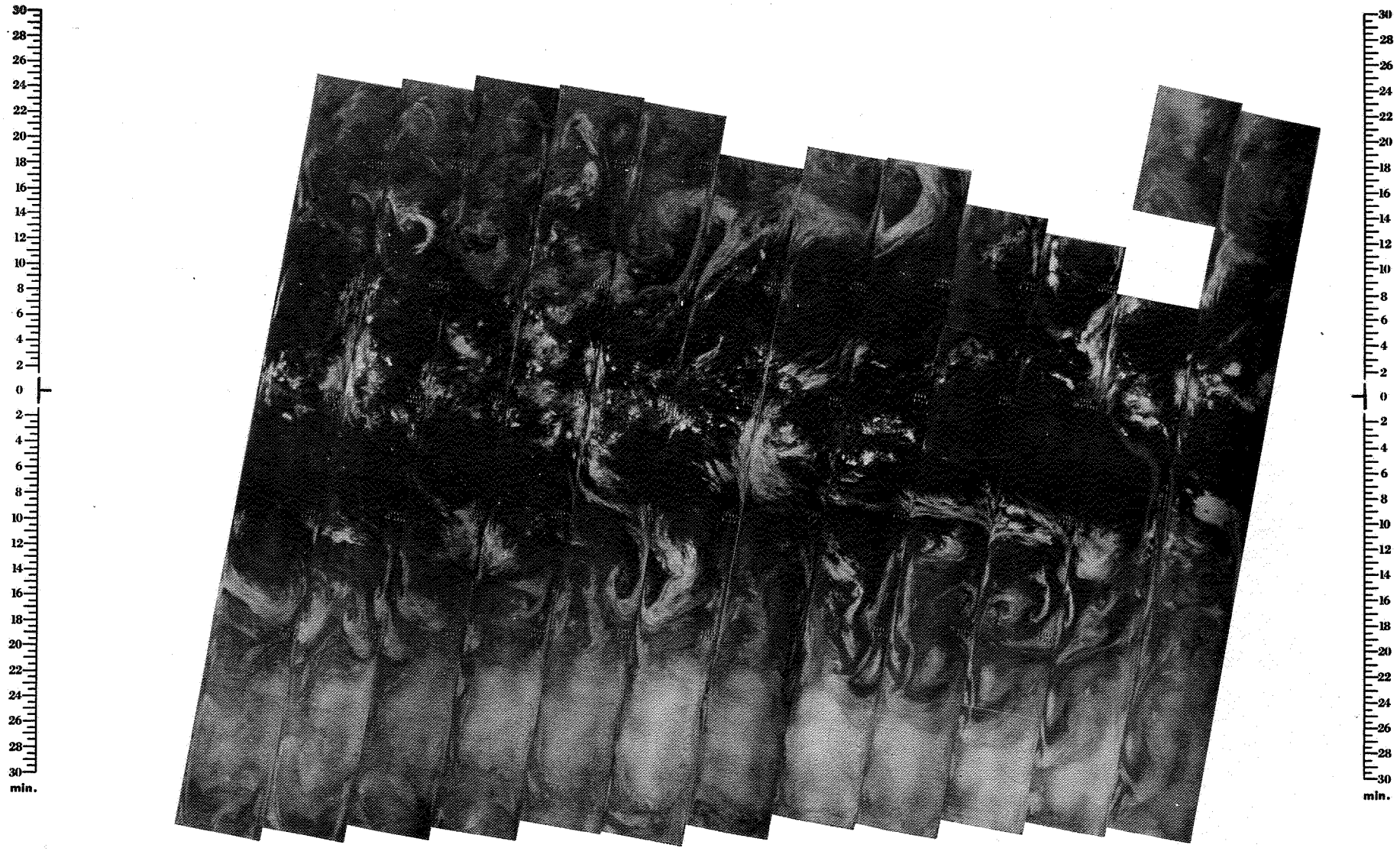

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2157 2156 2155 2154 2153 2152 2151 2150 2149 2148 2147 2146 2145 2144
20 MAY 1973
11.5 μm



2157 2156 2155 2154 2153 2152 2151 2150 2149 2148 2147 2146 2145 2144

20 MAY 1973

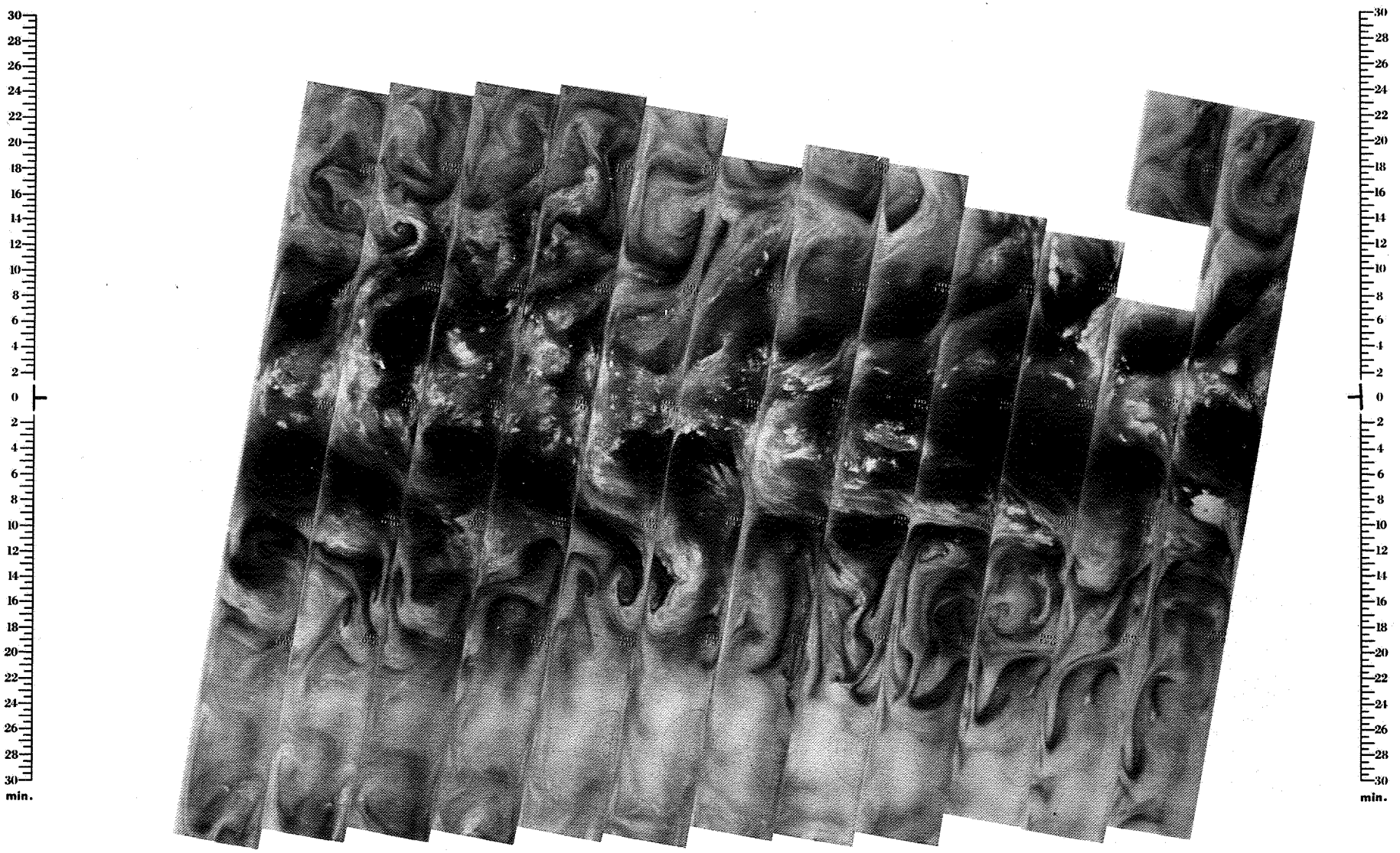
6.7 μm



2170 2169 2168 2167 2166 2165 2164 2163 2162 2161 2160 2159 2158

21 MAY 1973

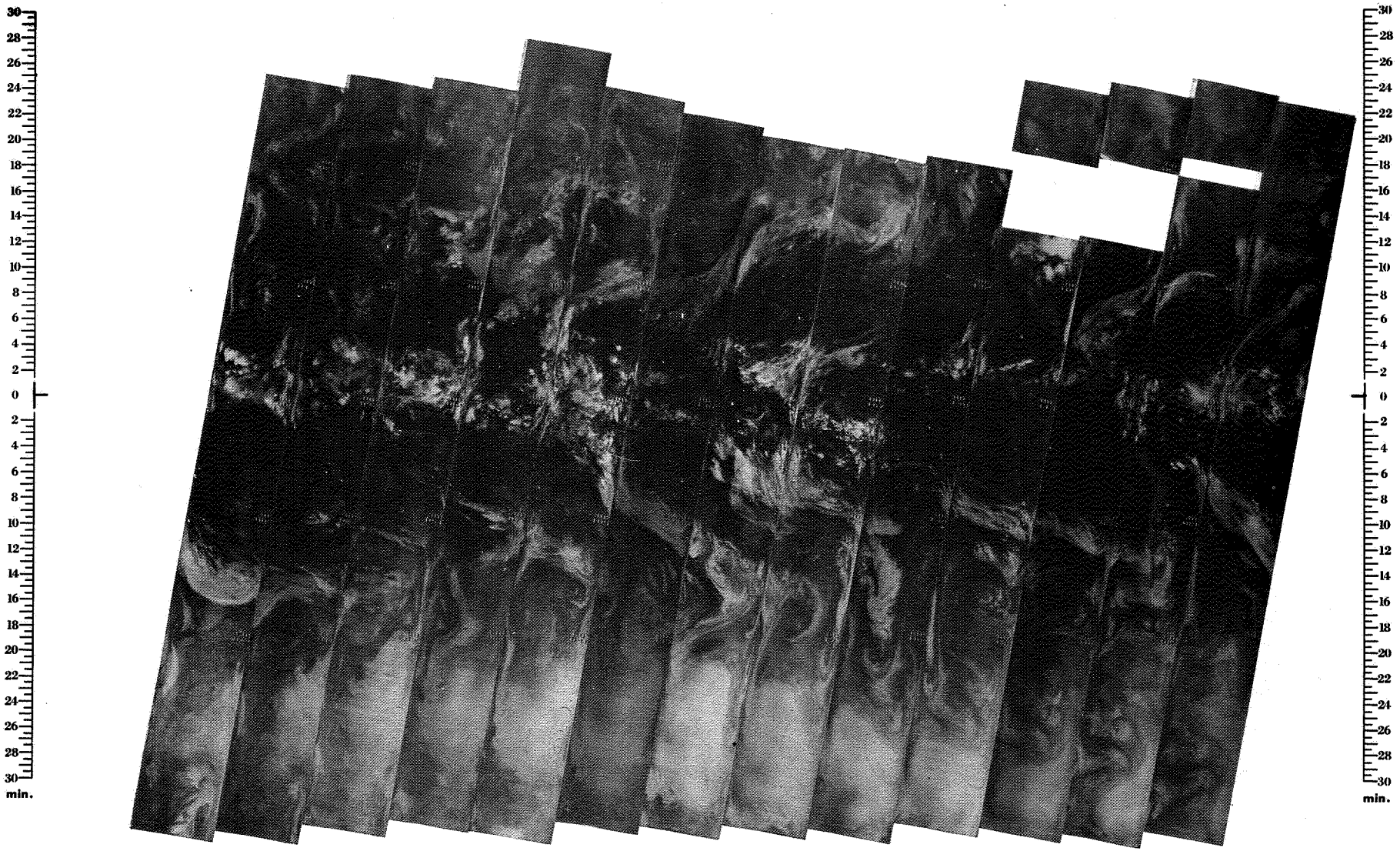
11.5 μm



2170 2169 2168 2167 2166 2165 2164 2163 2162 2161 2160 2159 2158

21 MAY 1973

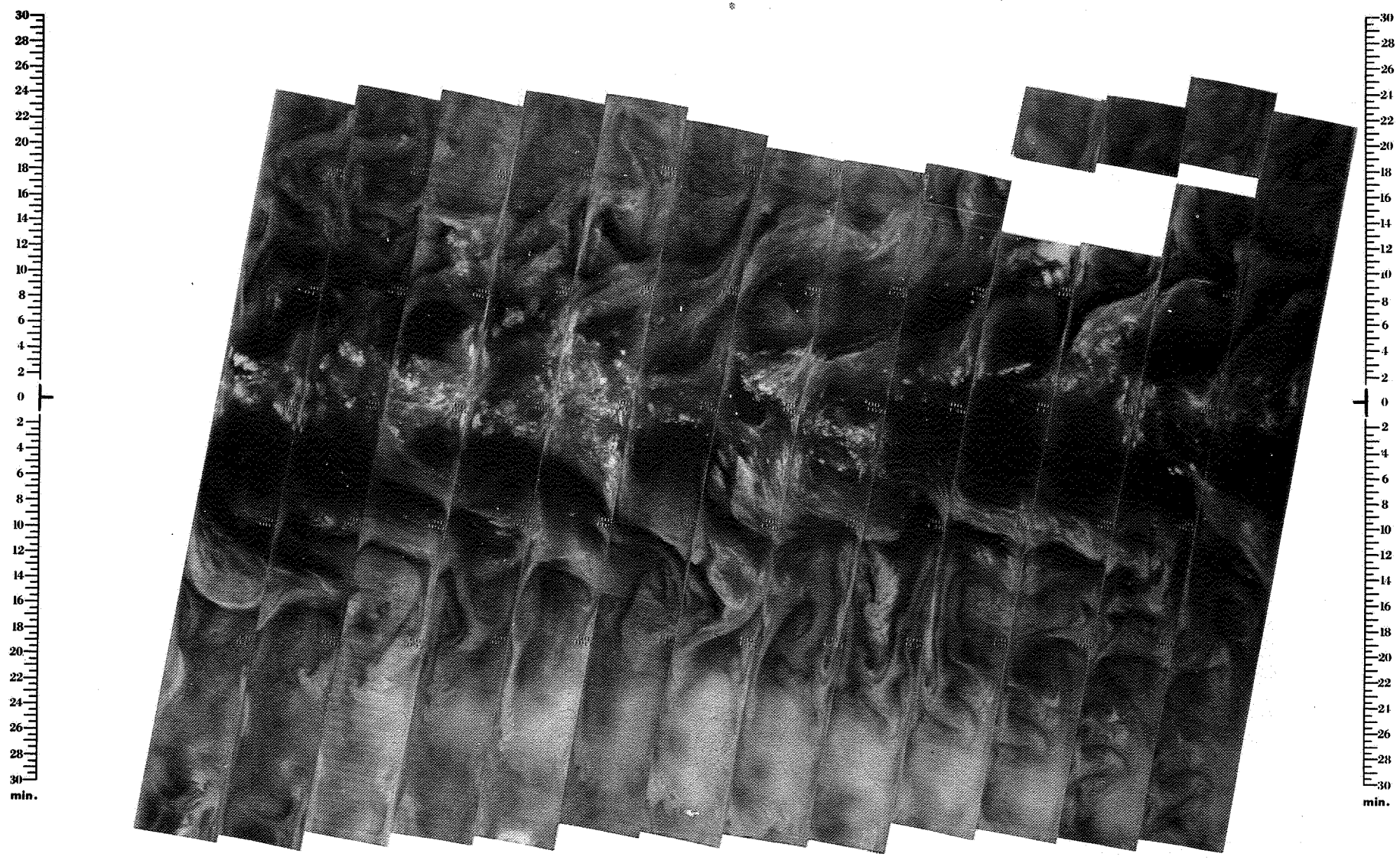
6.7 μm



2183 2182 2181 2180 2179 2178 2177 2176 2175 2174 2173 2172 2171

22 MAY 1973

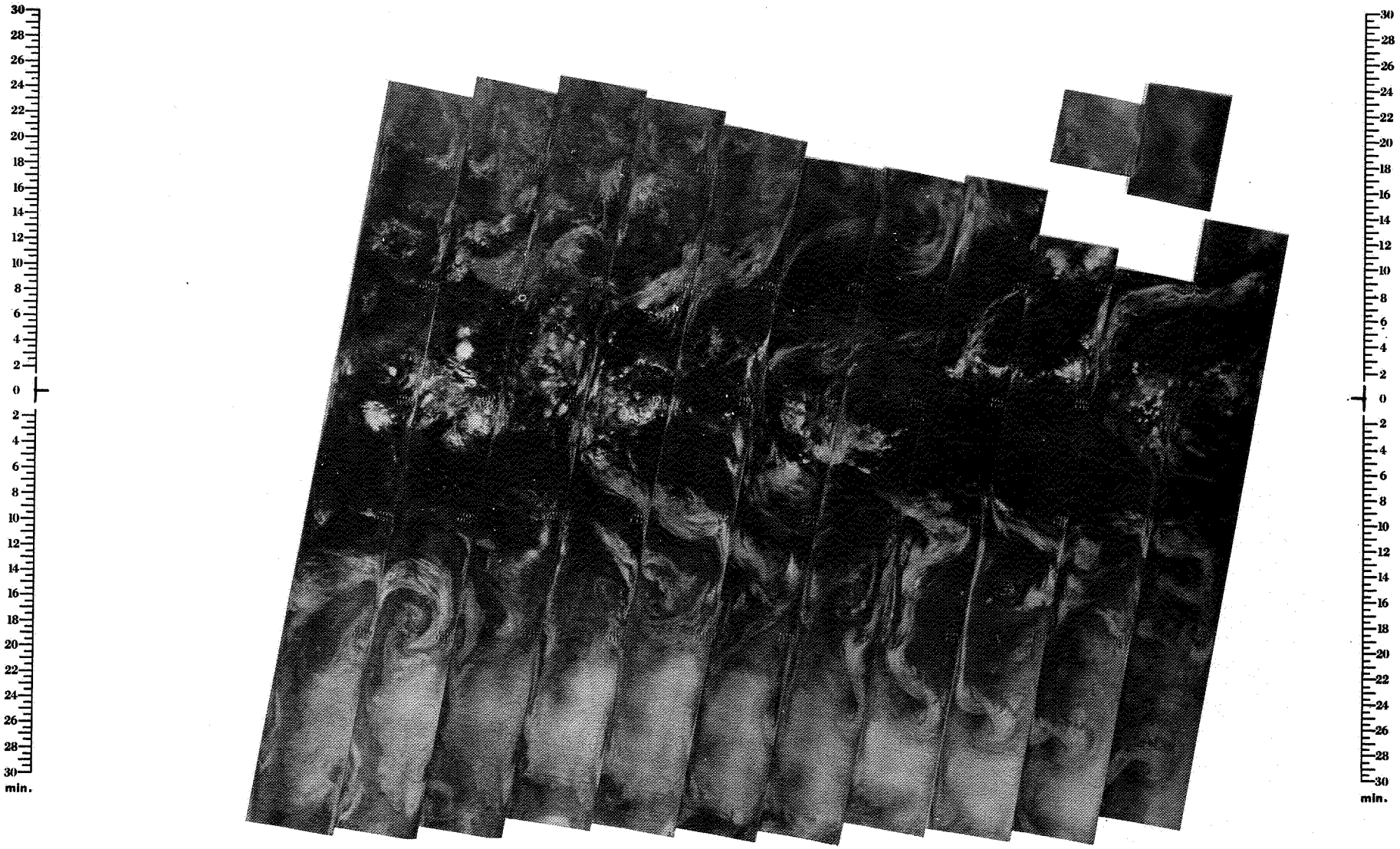
11.5 μm



2183 2182 2181 2180 2179 2178 2177 2176 2175 2174 2173 2172 2171

22 MAY 1973

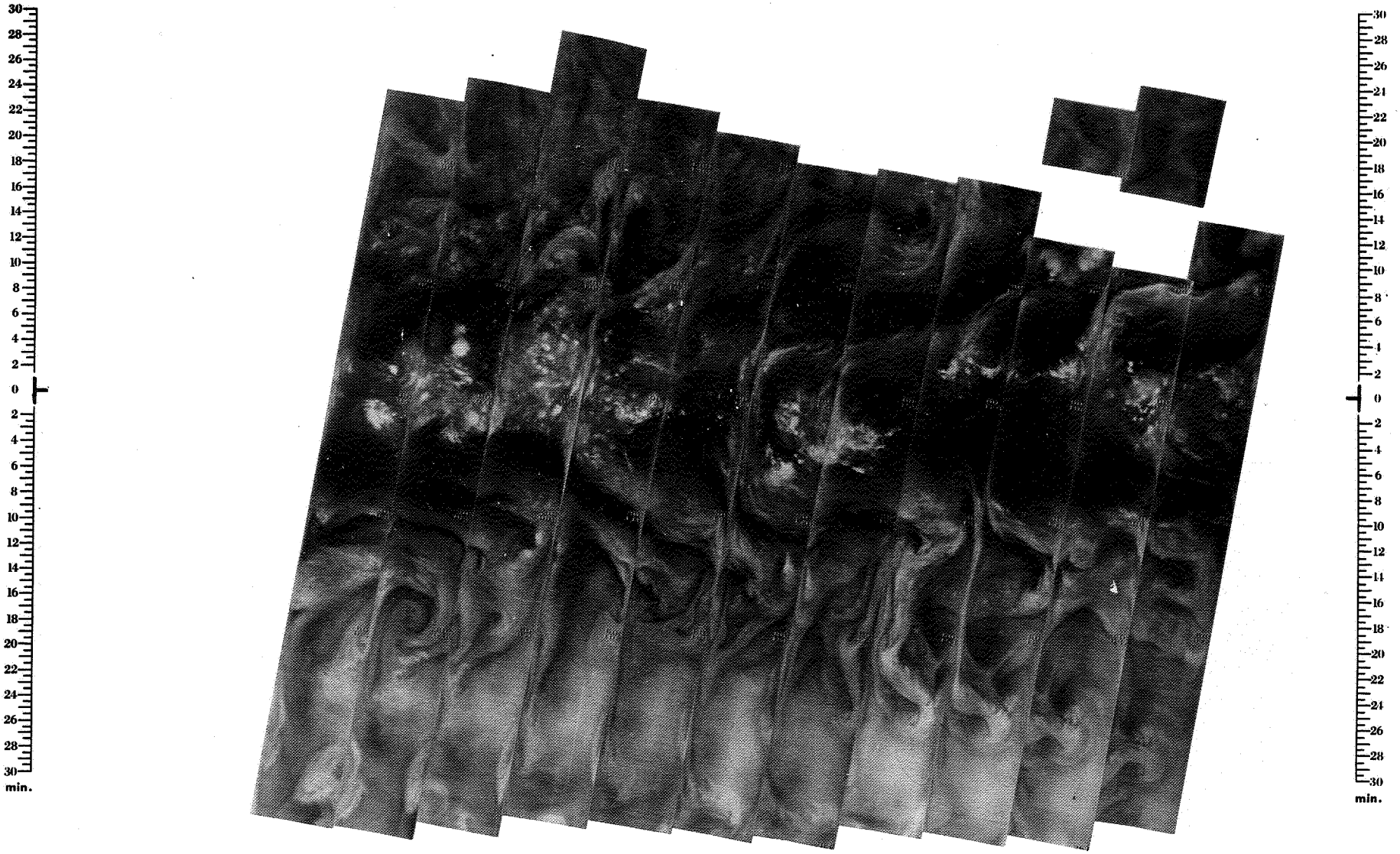
6.7 μm



2197 2196 2195 2194 2193 2192 2191 2190 2189 2188 2187 2186 2185 2184

23 MAY 1973

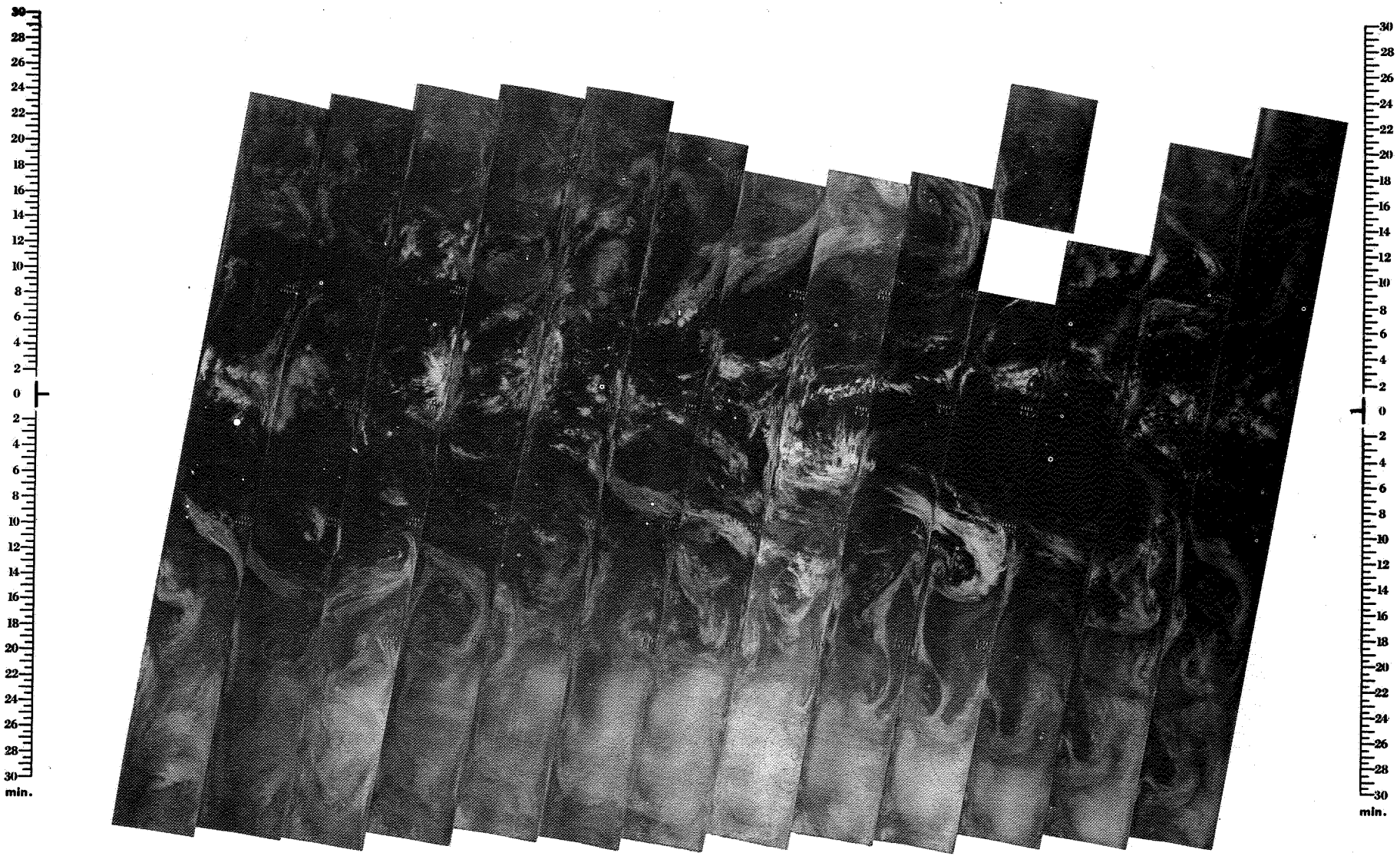
11.5 μm

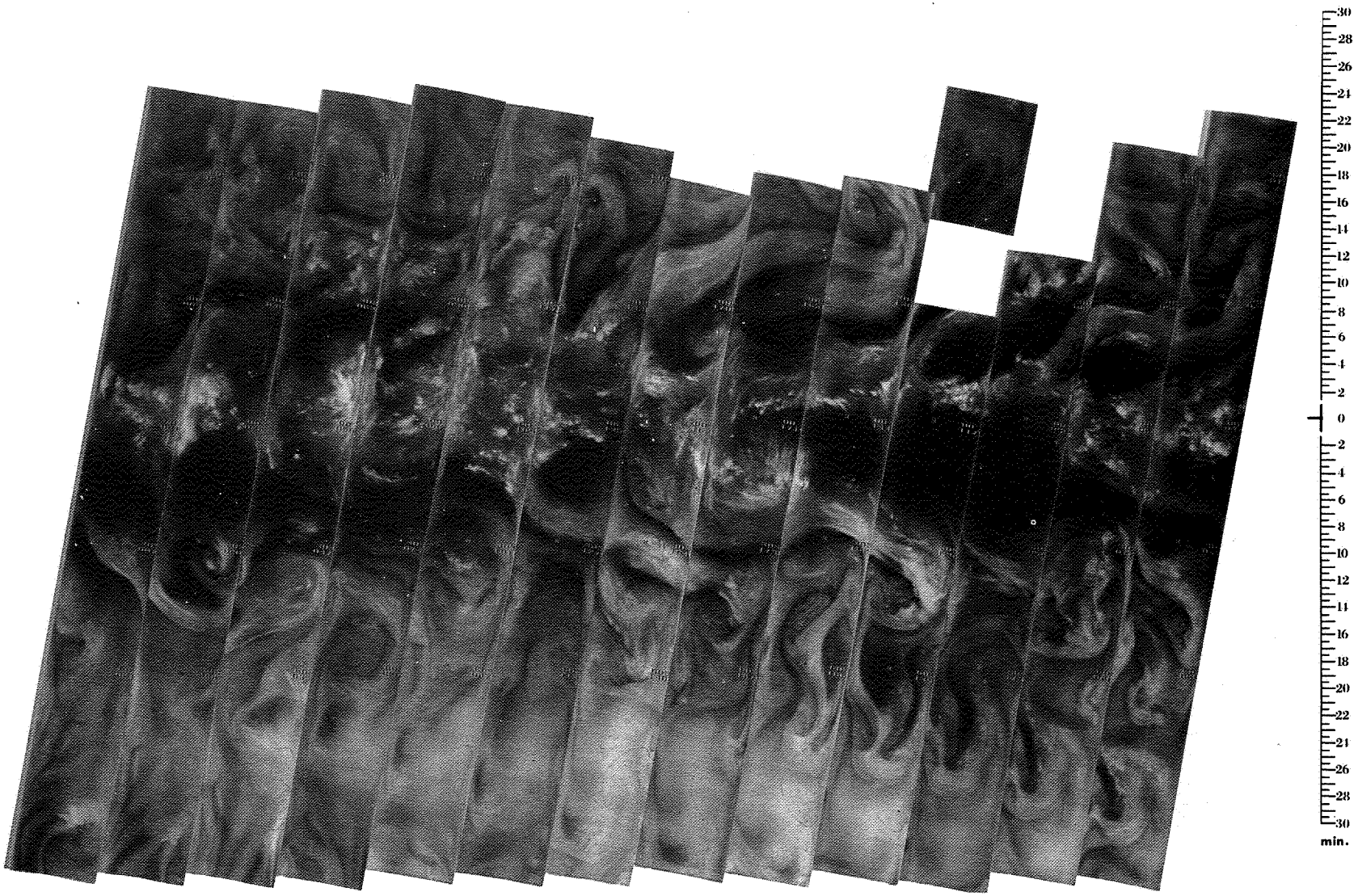


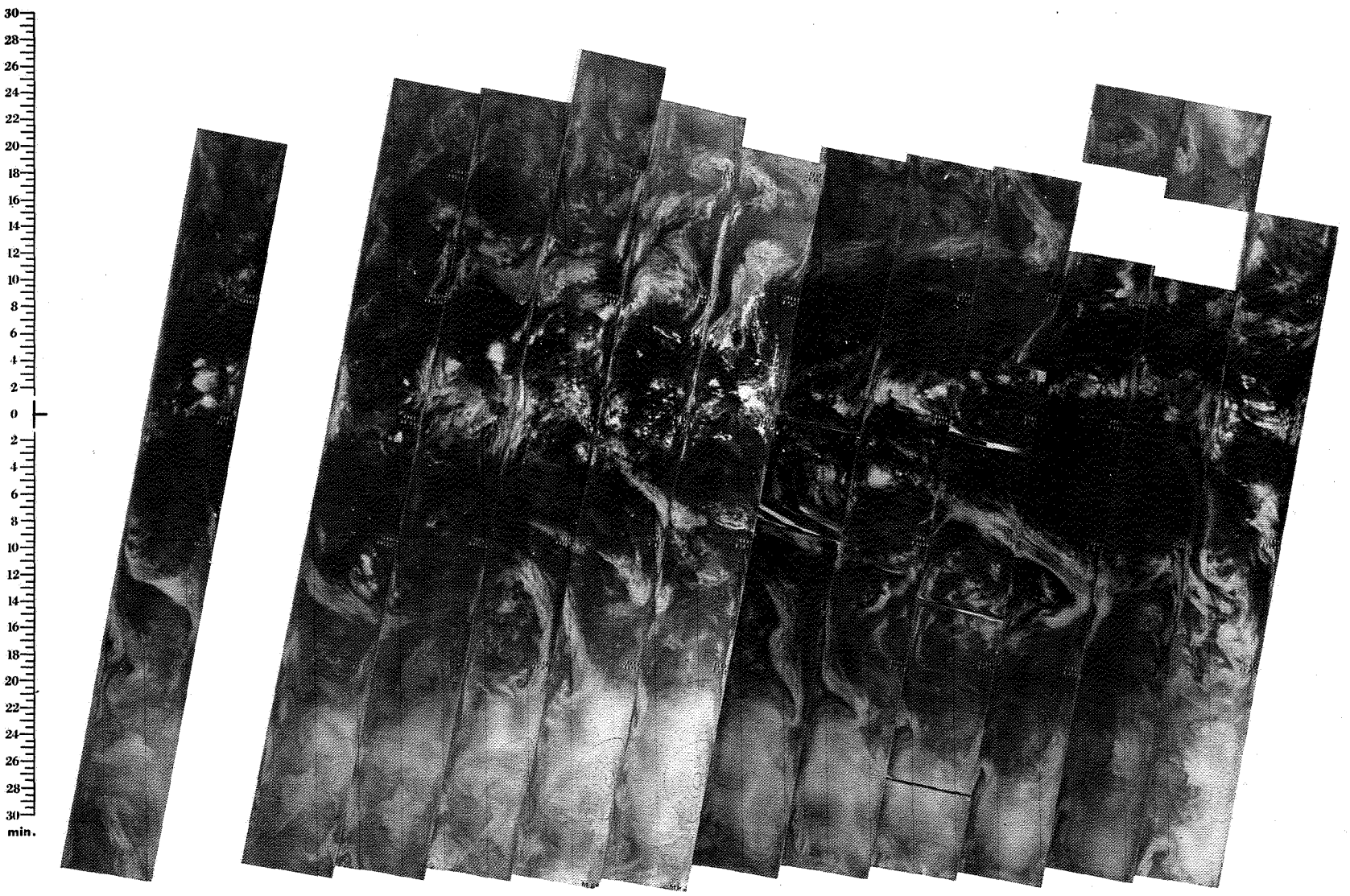
2197 2196 2195 2194 2193 2192 2191 2190 2189 2188 2187 2186 2185 2184

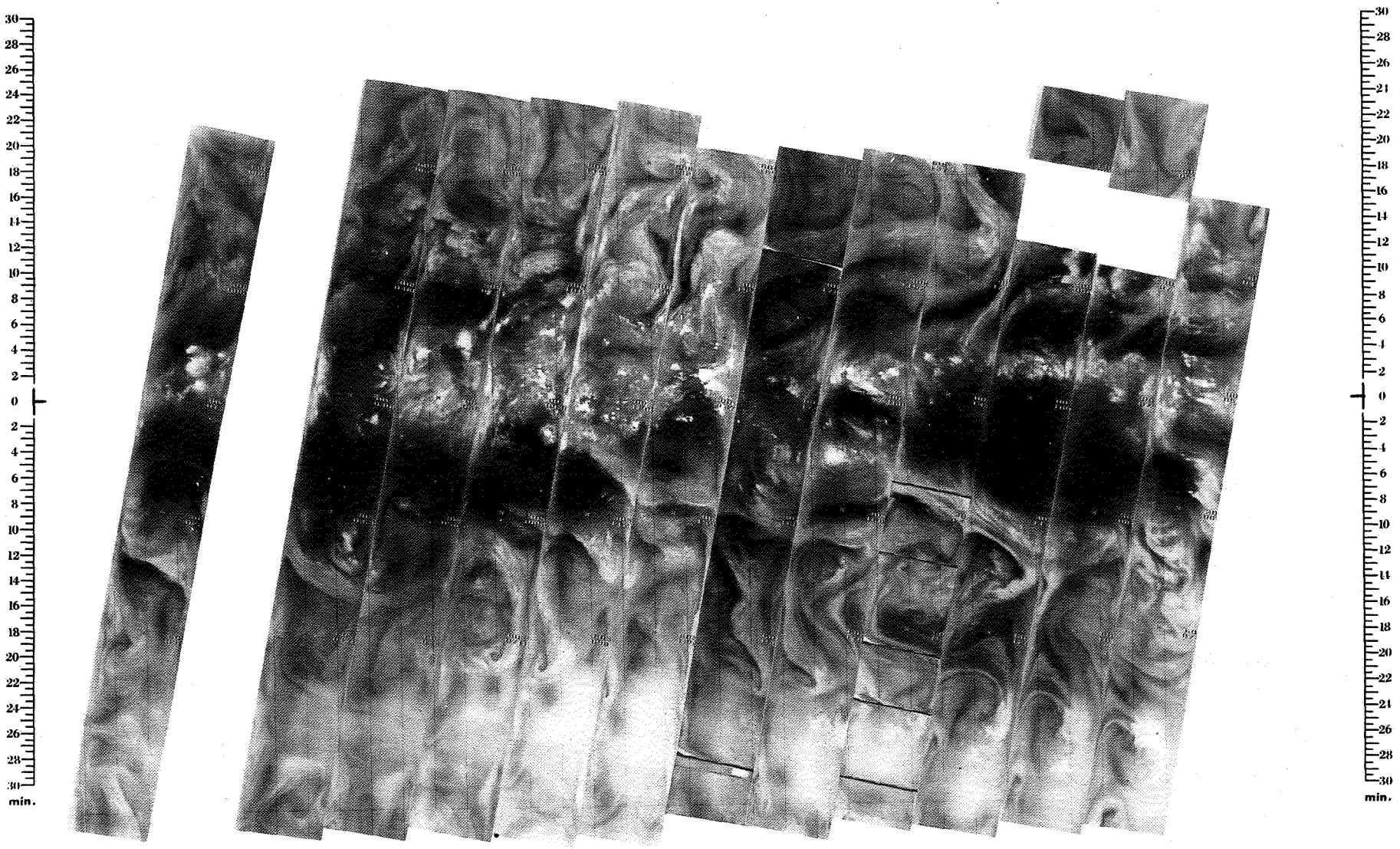
23 MAY 1973

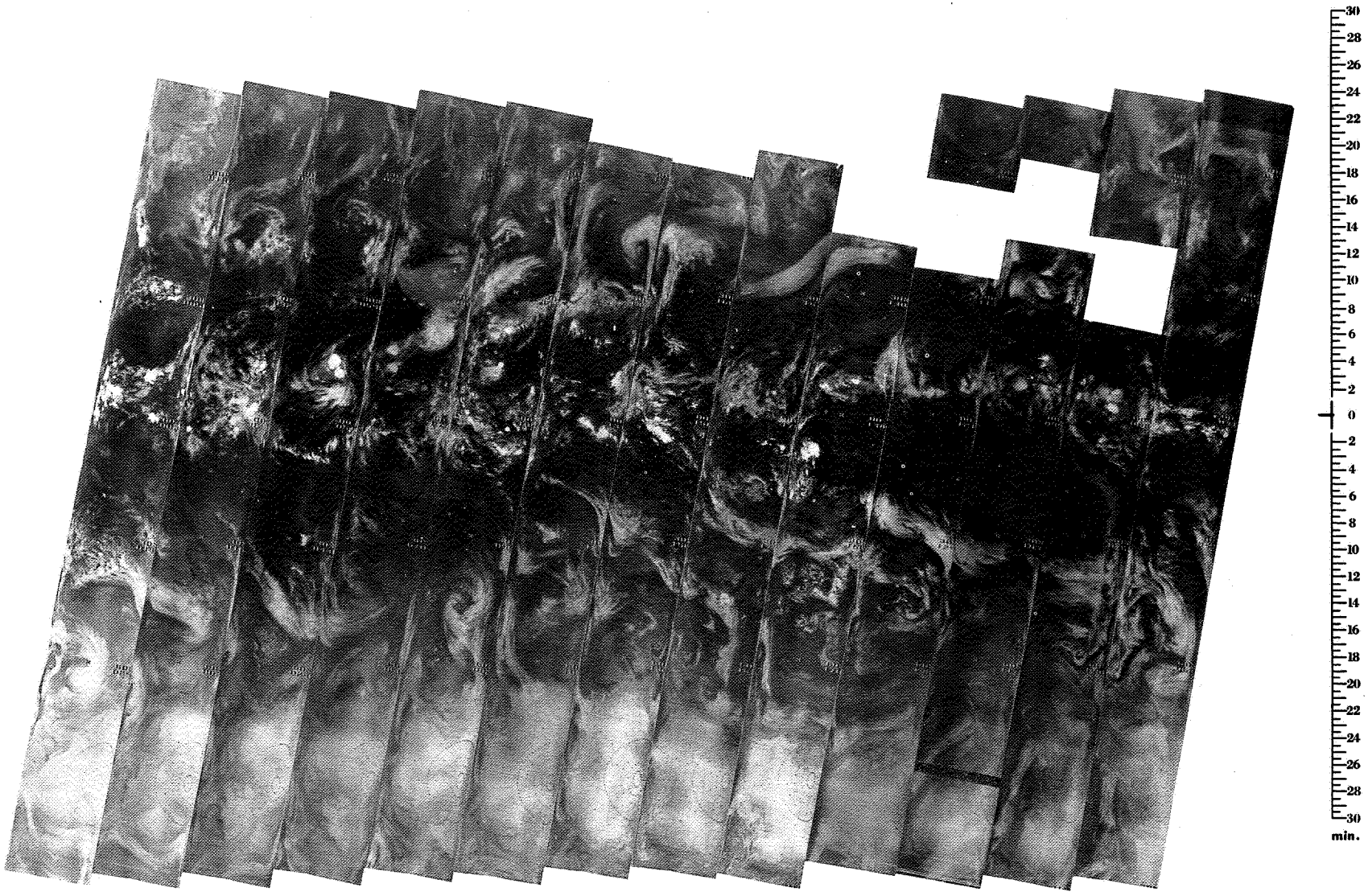
6.7 μm


min.
min.
2210 2209 2208 2207 2206 2205 2204 2203 2202 2201 2200 2199 2198
24 MAY 1973
11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2210 2209 2208 2207 2206 2205 2204 2203 2202 2201 2200 2199 2198
24 MAY 1973
6.7 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2224 2223 2222 2221 2220 2219 2218 2217 2216 2215 2214 2213 2212 2211
25 MAY 1973
11.5 μm

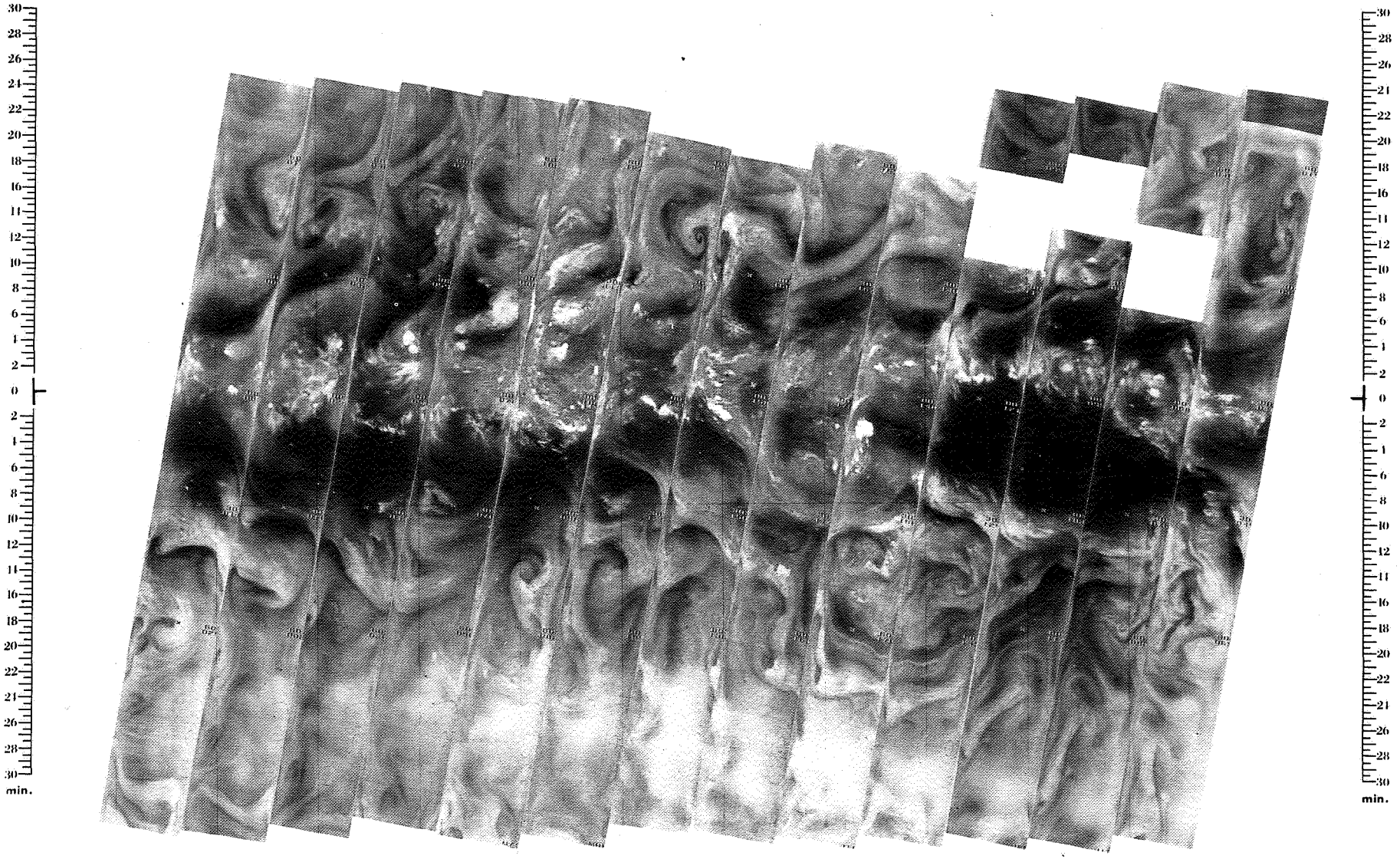

min.
min.
2224 2223 2222 2221 2220 2219 2218 2217 2216 2215 2214 2213 2212 2211
25 MAY 1973
6.7 μm



2237 2236 2235 2234 2233 2232 2231 2230 2229 2228 2227 2226 2225

26 MAY 1973

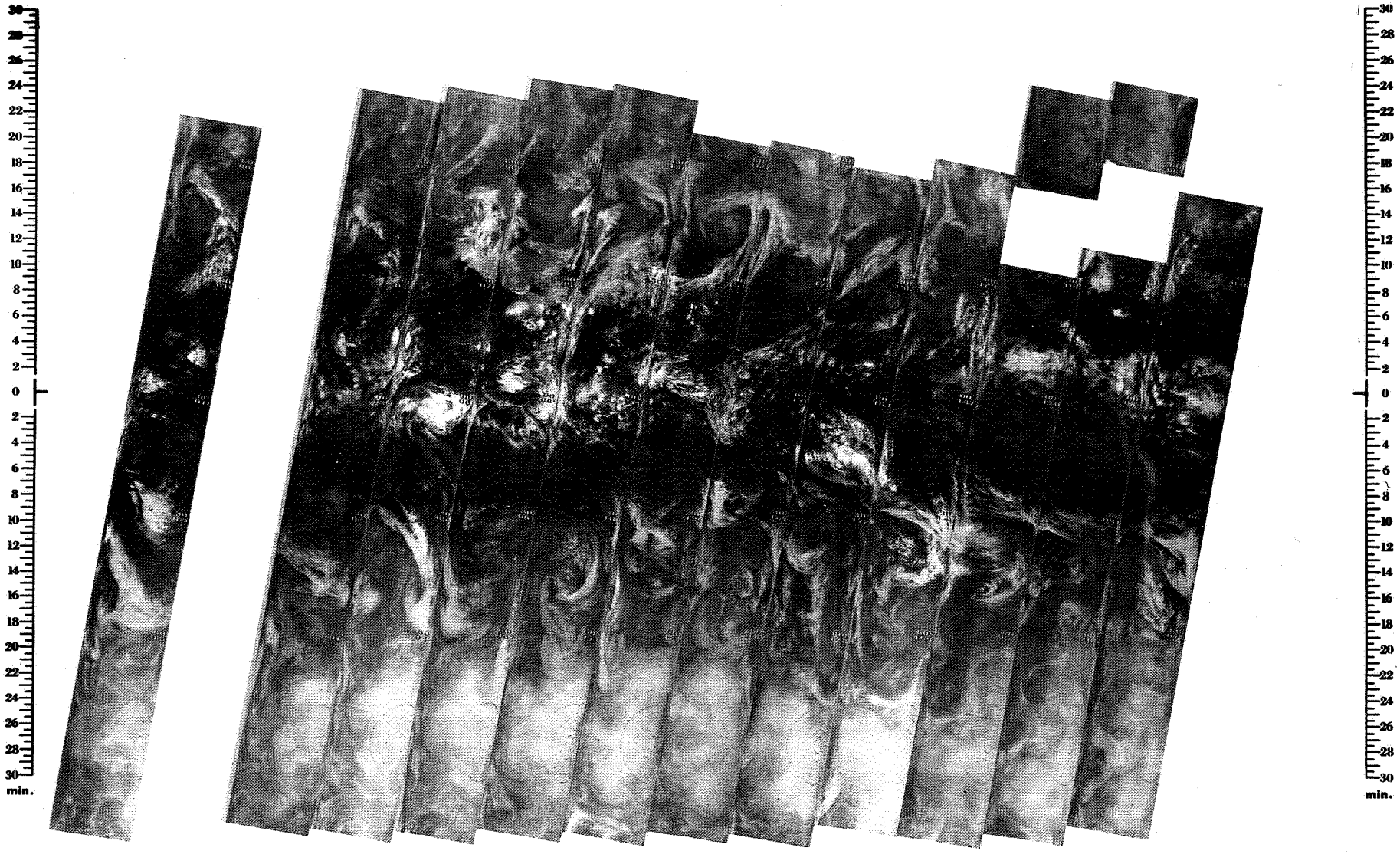
11.5 μm

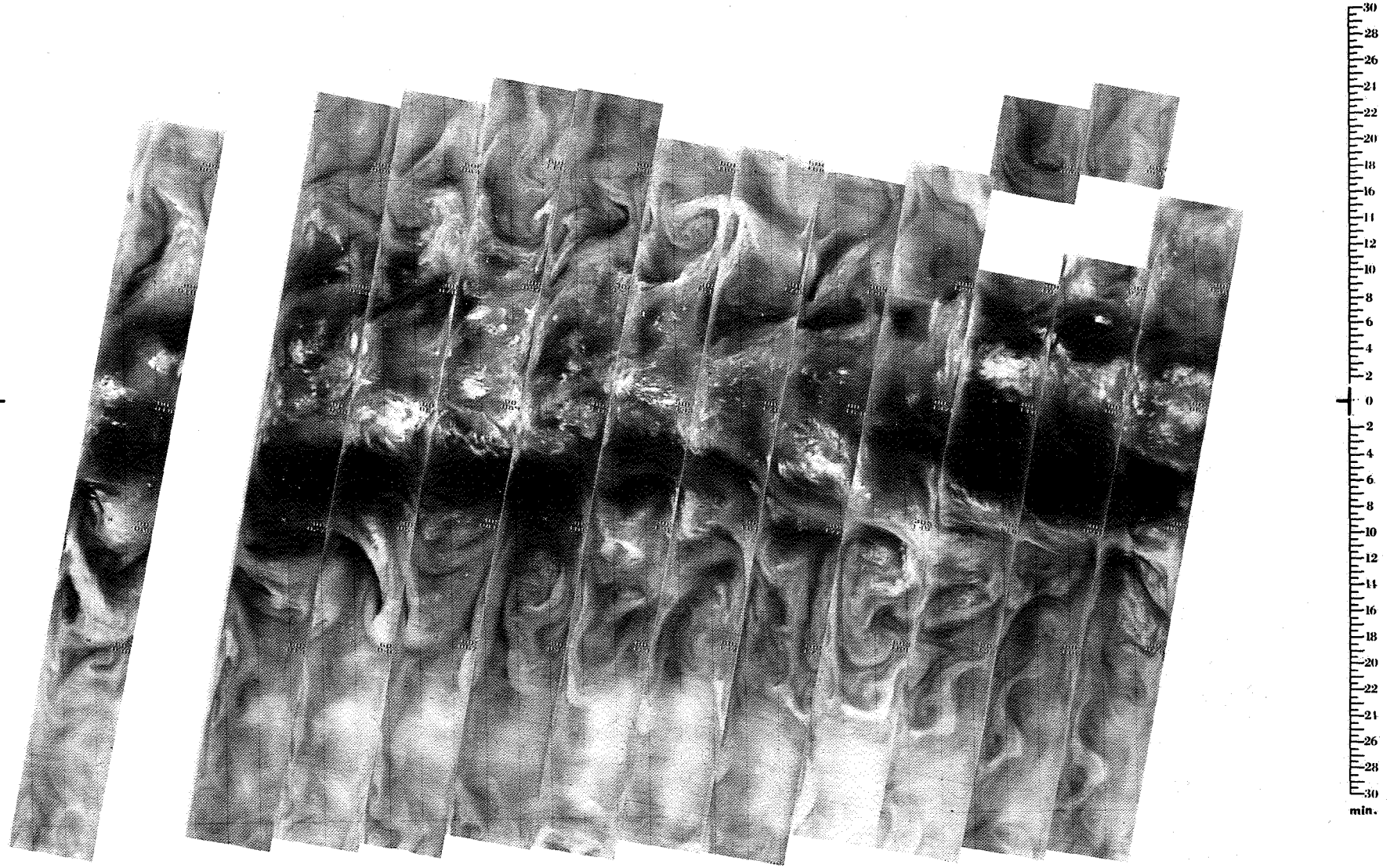


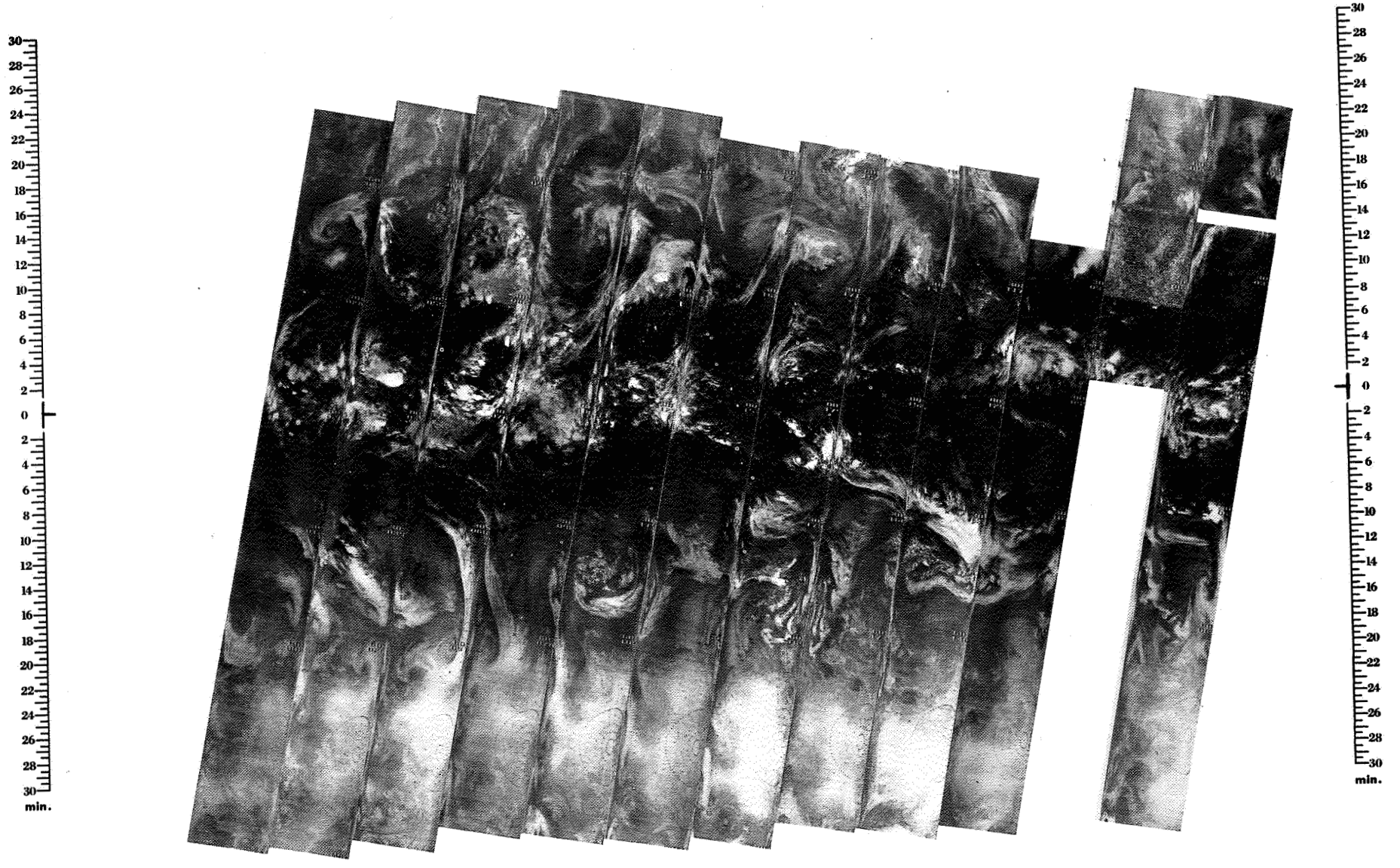
2237 2236 2235 2234 2233 2232 2231 2230 2229 2228 2227 2226 2225

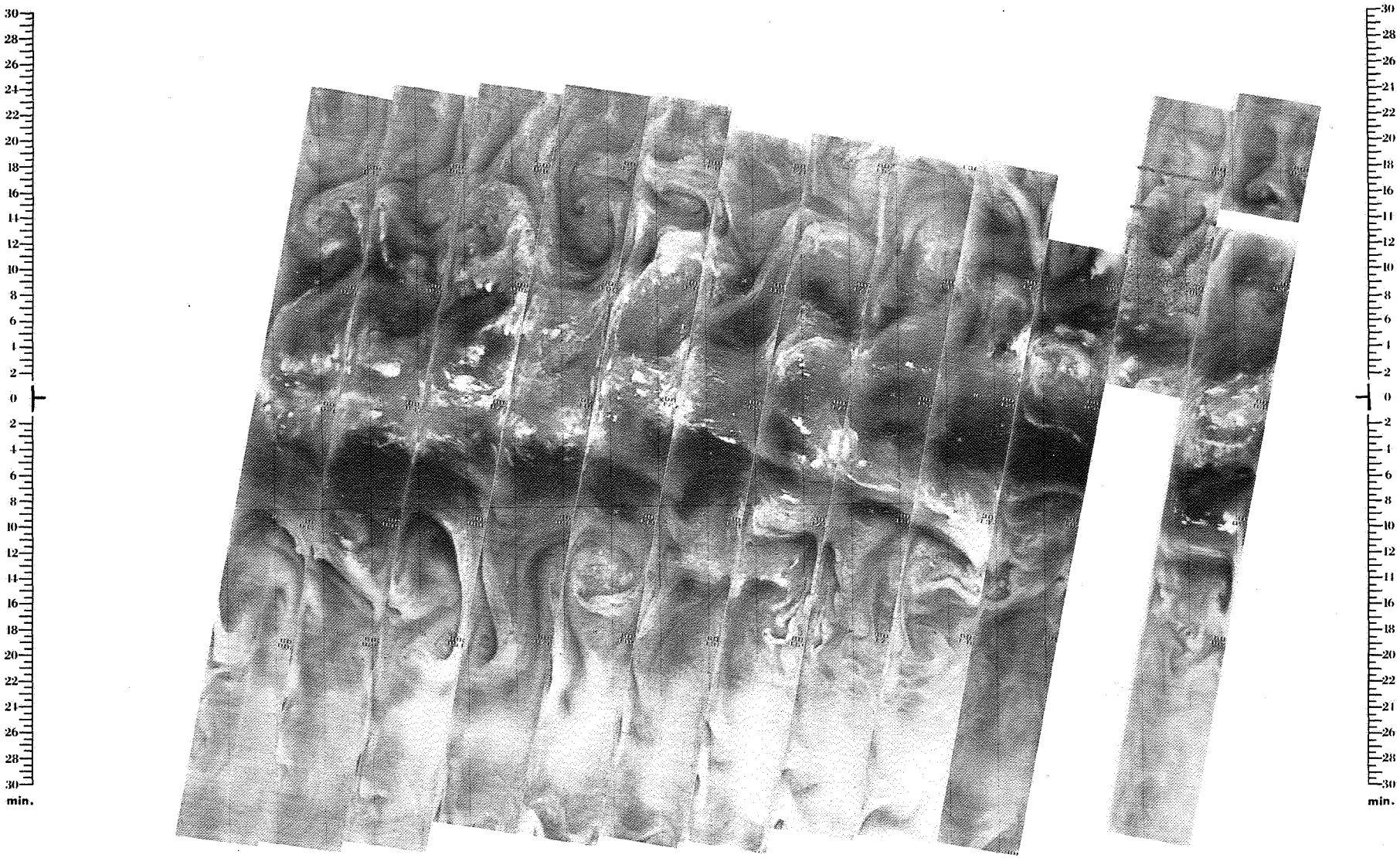
26 MAY 1973

6.7 μm


min.
min.
2251
2250
2249
2248
2247
2246
2245
2244
2243
2242
2241
2240
2239
2238
27 MAY 1973
11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2251 2250 2249 2248 2247 2246 2245 2244 2243 2242 2241 2240 2239 2238
27 MAY 1973
6.7 μm


2264
2263
2262
2261
2260
2259
2258
2257
2256
2255
2254
2253
2252
28 MAY 1973
11.5 μm
min.
min.



2264 2263 2262 2261 2260 2259 2258 2257 2256 2255 2254 2253 2252

28 MAY 1973

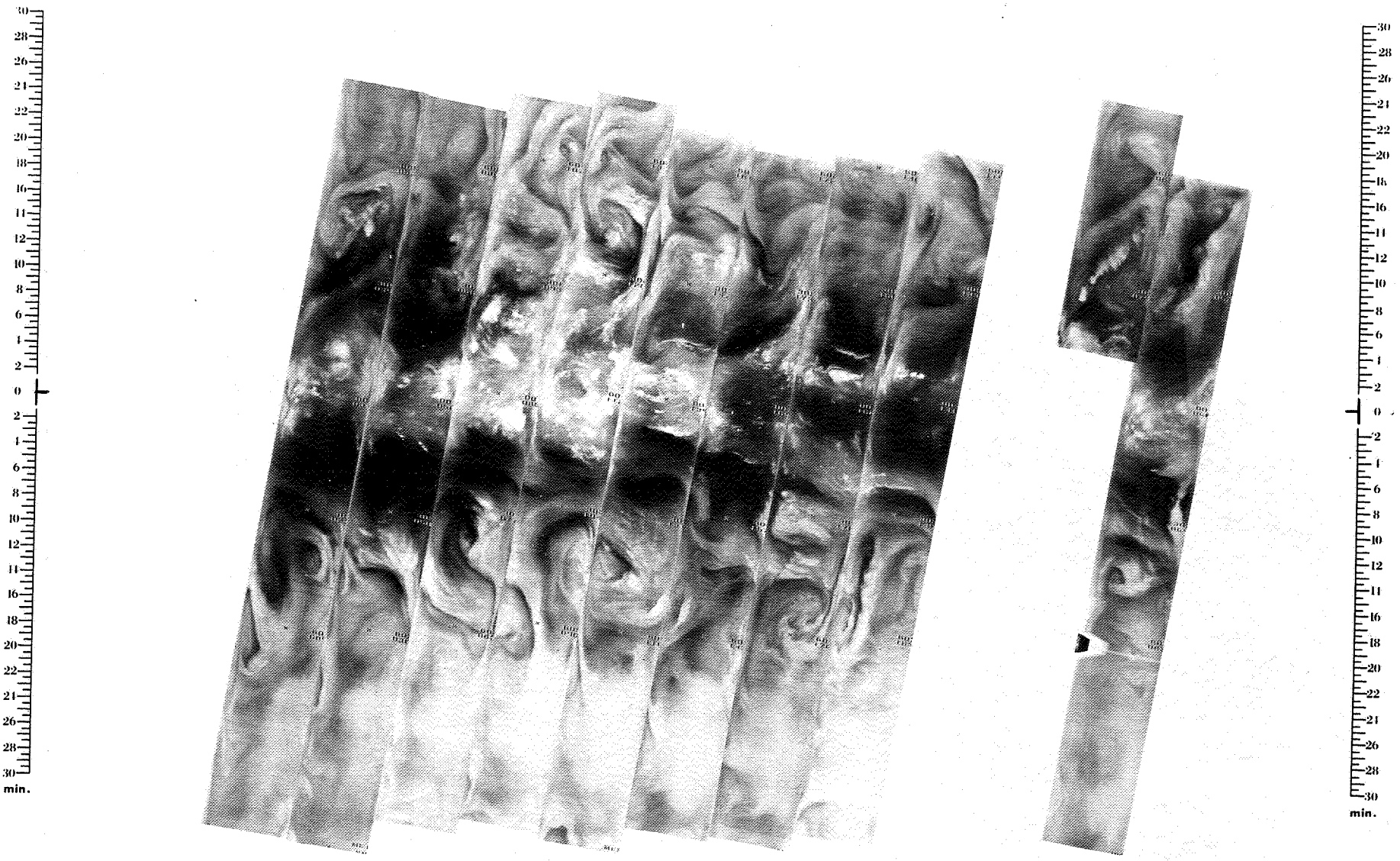
6.7 μm

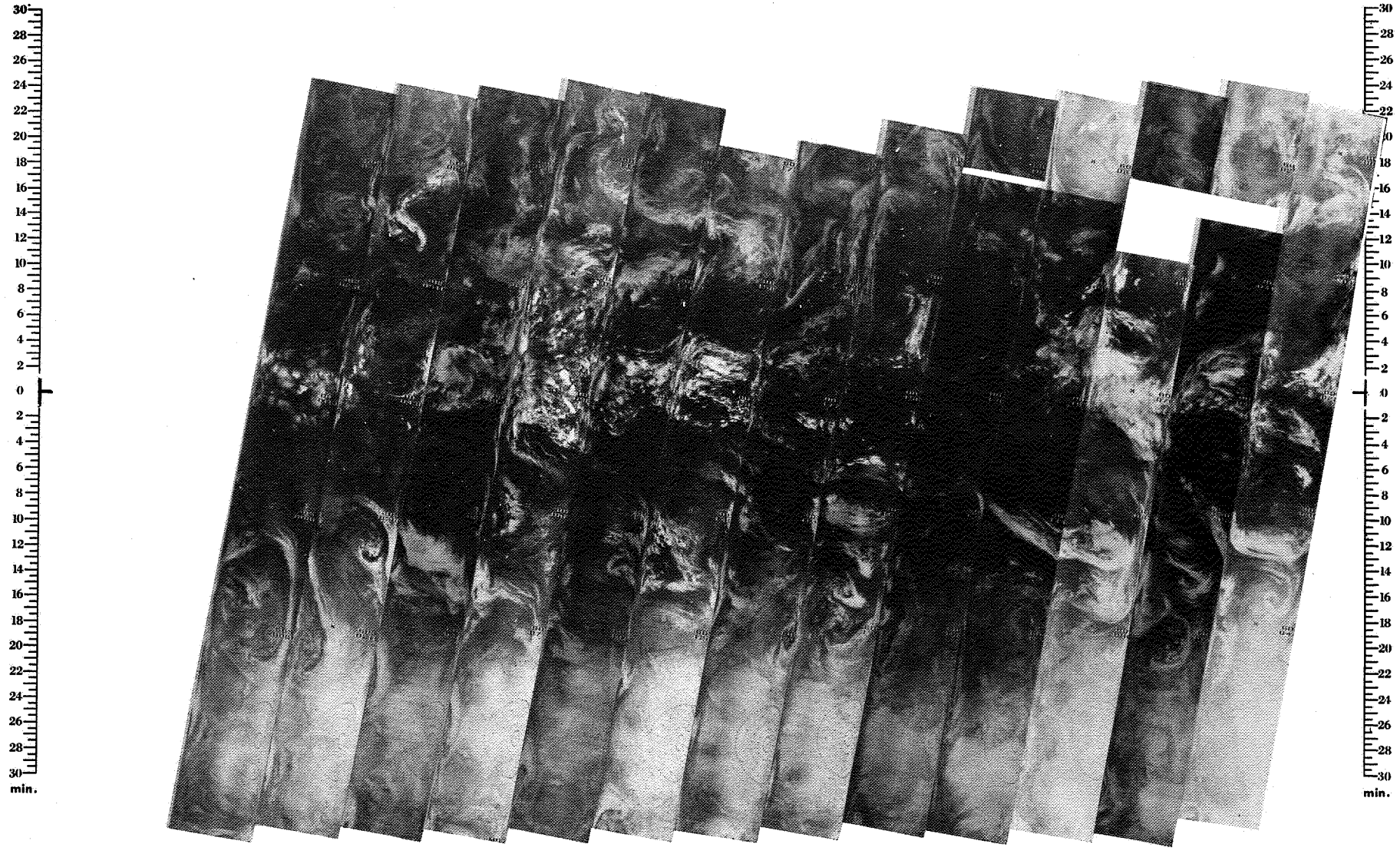


2277 2276 2275 2274 2273 2272 2271 2270 2269 2268 2267 2266 2265

29 MAY 1973

11.5 μm

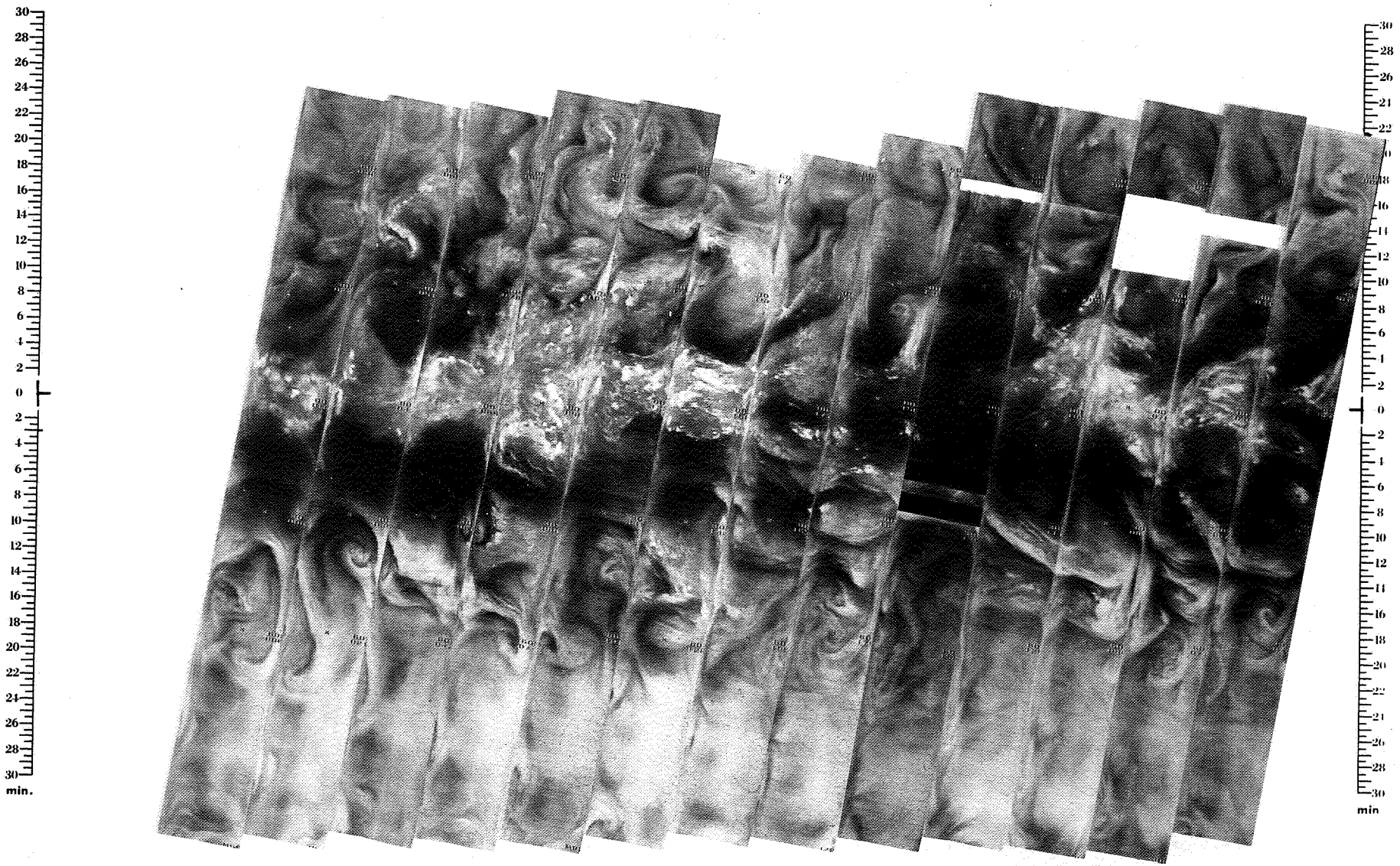

min.
min.
2277
2276
2275
2274
2273
2272
2271
2270
2269
2268
2267
2266
2265
29 MAY 1973
6.7 μm

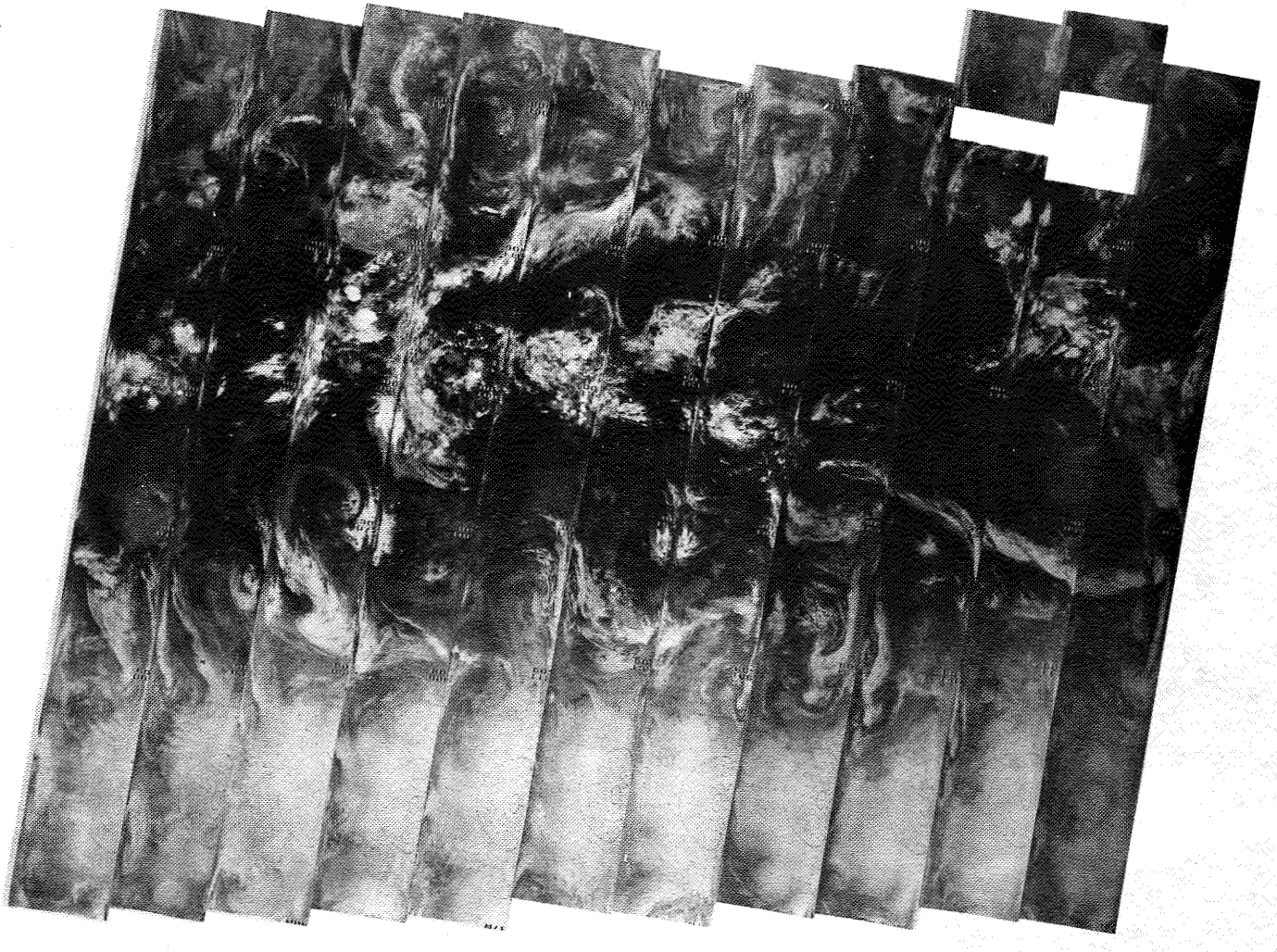


2291 2290 2289 2288 2287 2286 2285 2284 2283 2282 2281 2280 2279 2278

30 MAY 1973

11.5 μm

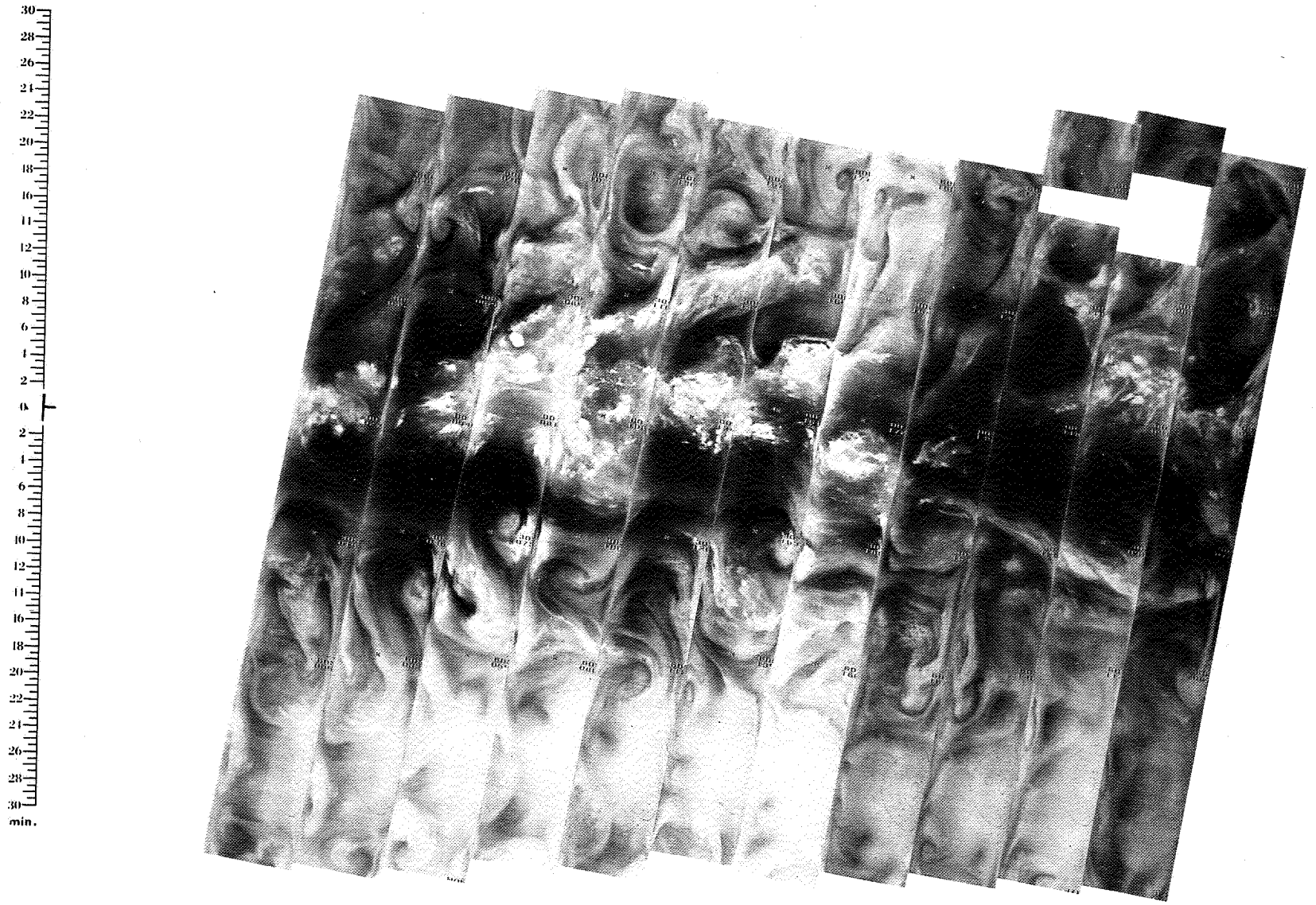

min.
min
2291 2290 2289 2288 2287 2286 2285 2284 2283 2282 2281 2280 2279 2278
30 MAY 1973
6.7 μm



2304 2303 2302 2301 2300 2299 2298 2297 2296 2295 2294 2293 2292

31 MAY 1973

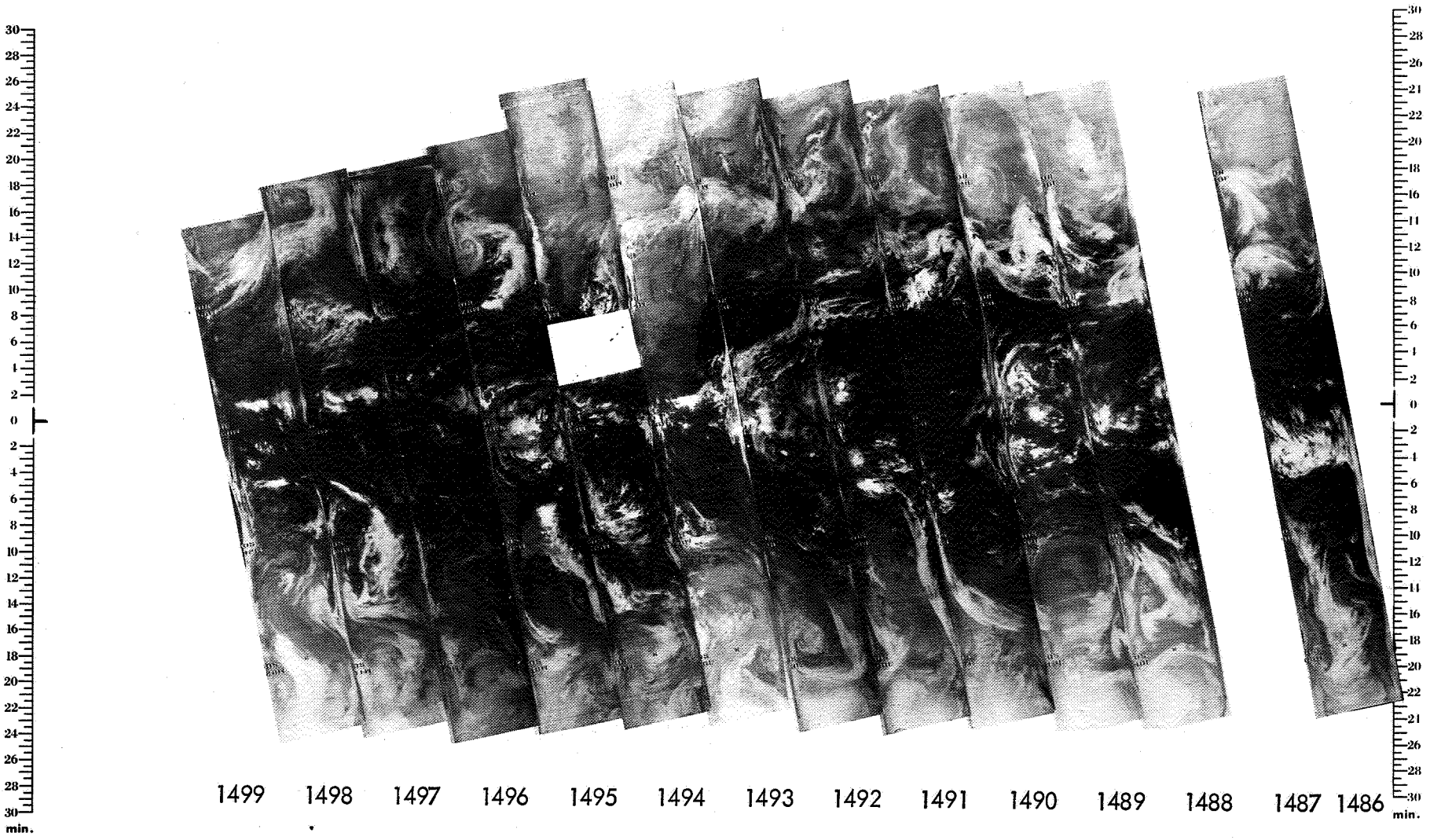
11.5 μm


min.
2304 2303 2302 2301 2300 2299 2298 2297 2296 2295 2294 2293 2292
31 MAY 1973
6.7 μm

SECTION 4.2

TEMPERATURE HUMIDITY INFRARED RADIOMETER

DAYTIME MONTAGES

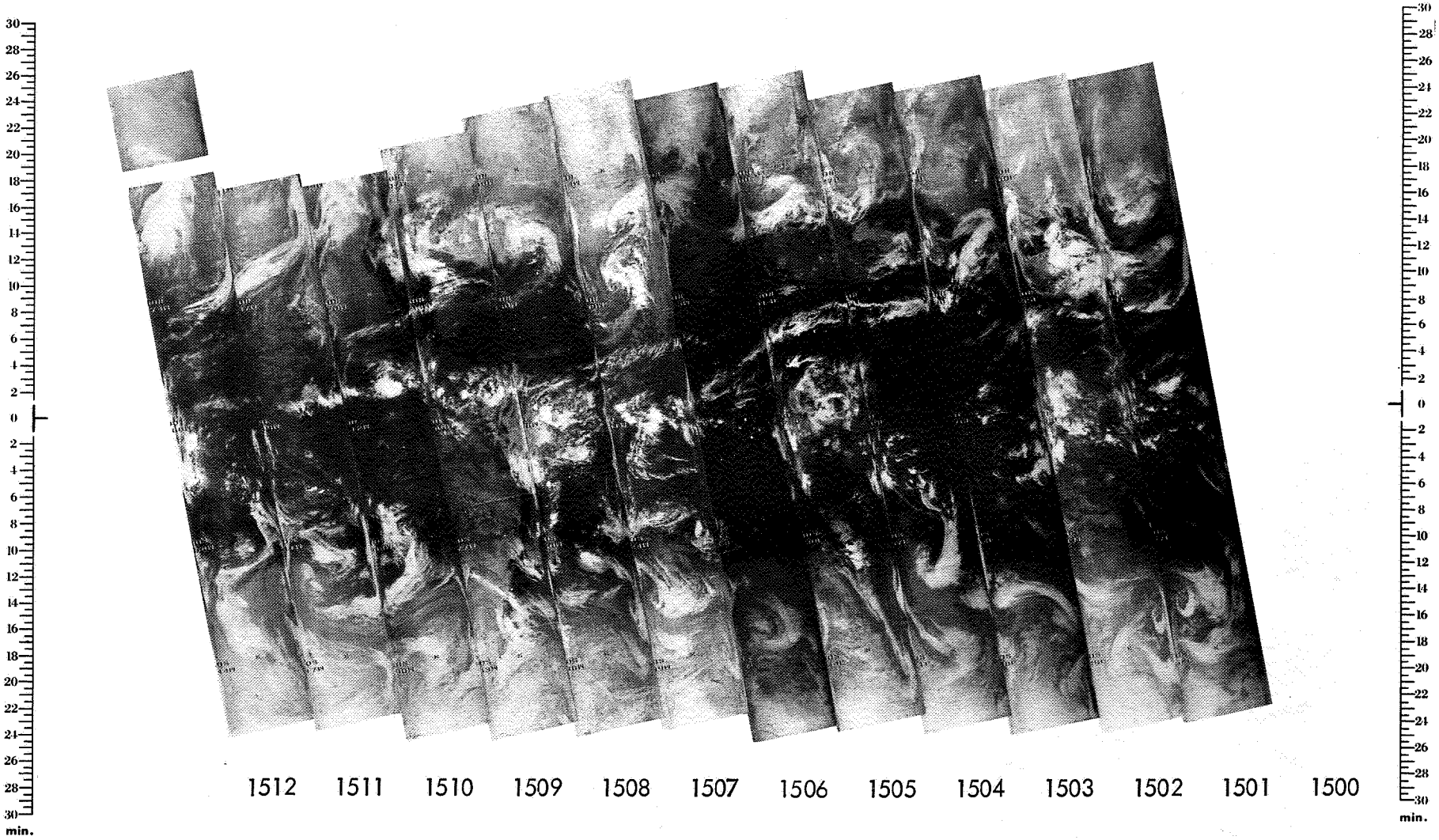


1 APRIL 1973

11.5 μm

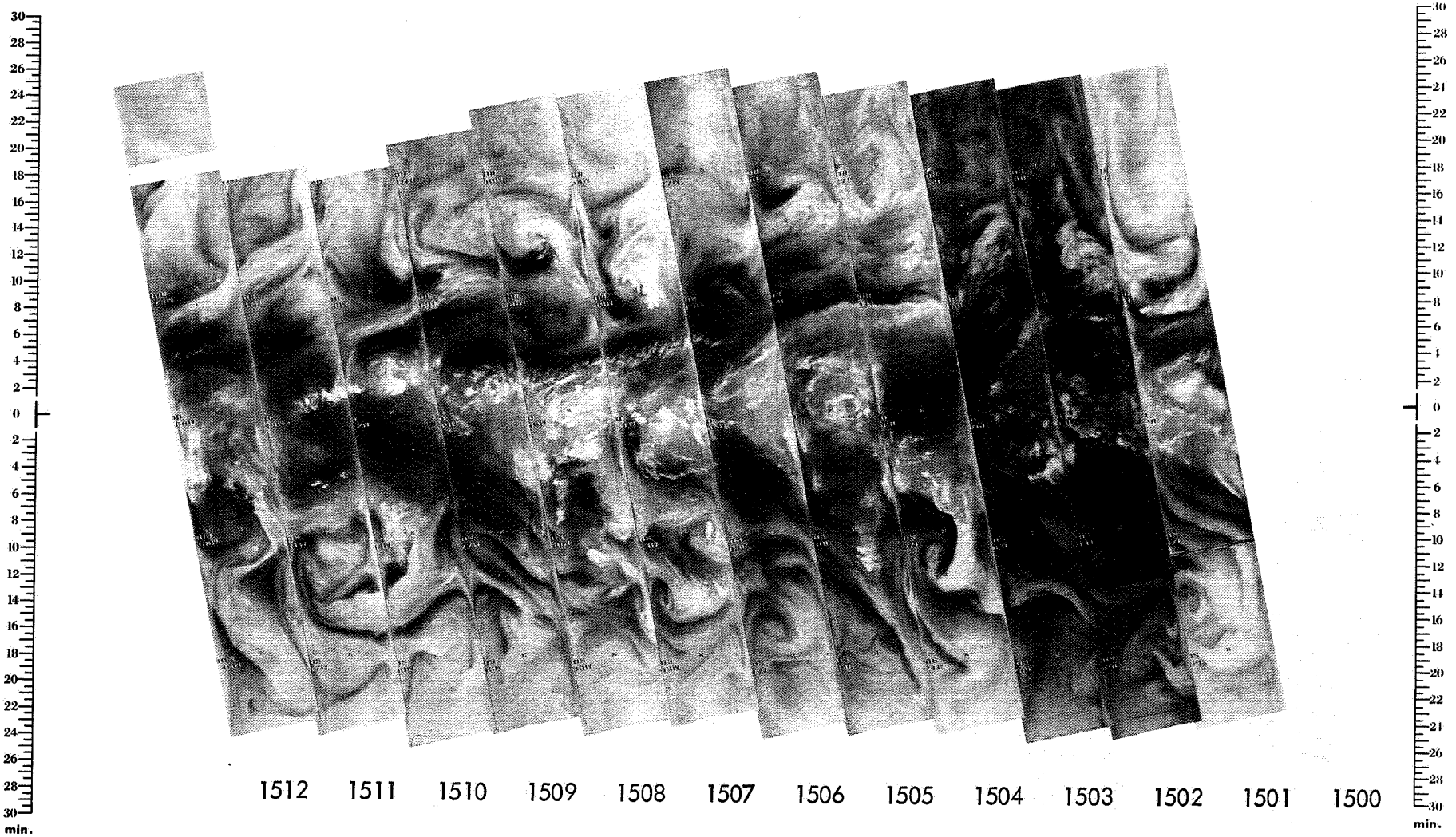
1 APRIL 1973

6.7 μm



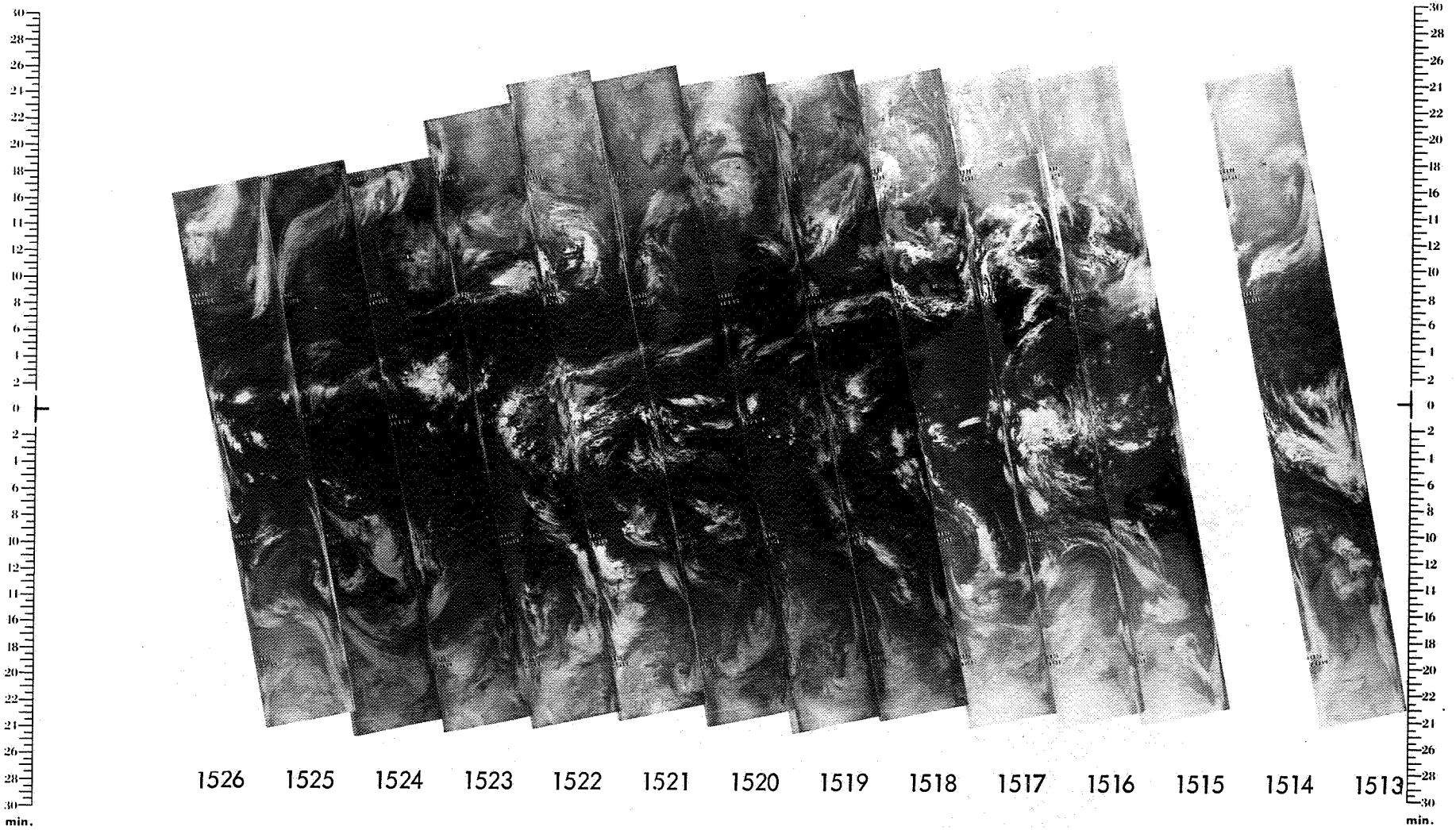
2 APRIL 1973

11.5 μm



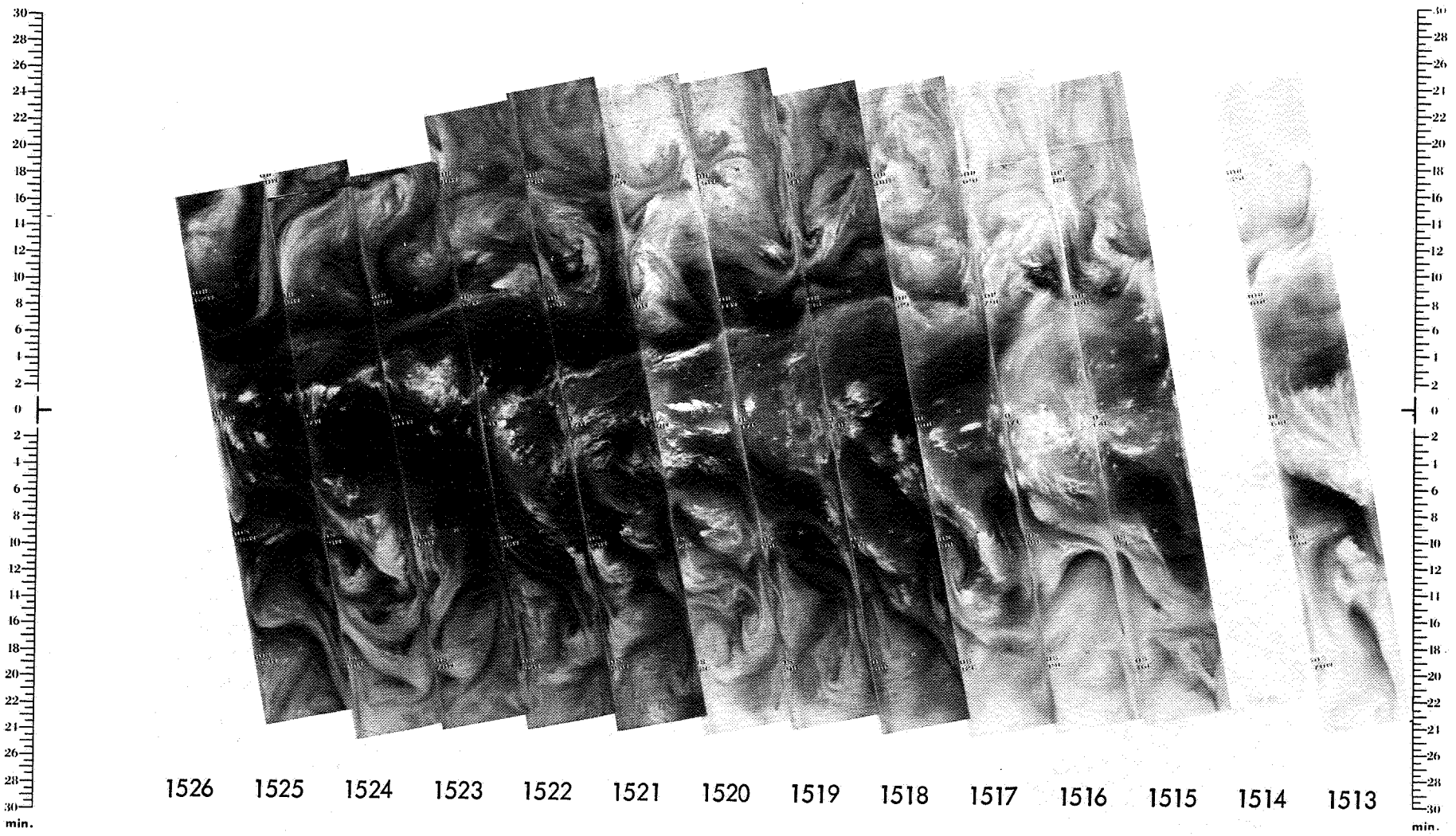
2 APRIL 1973

6.7 μm



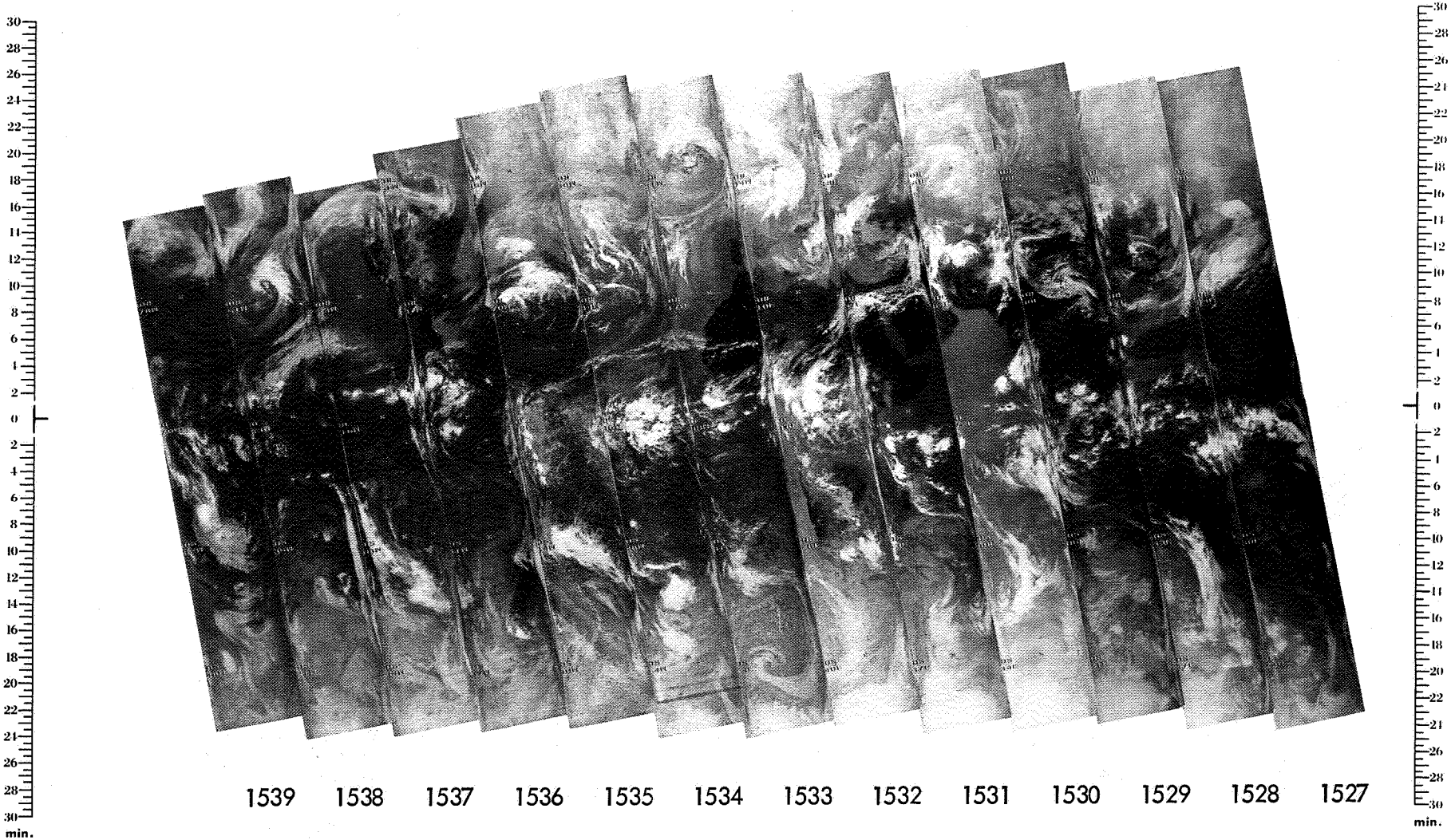
3 APRIL 1973

11.5 μm



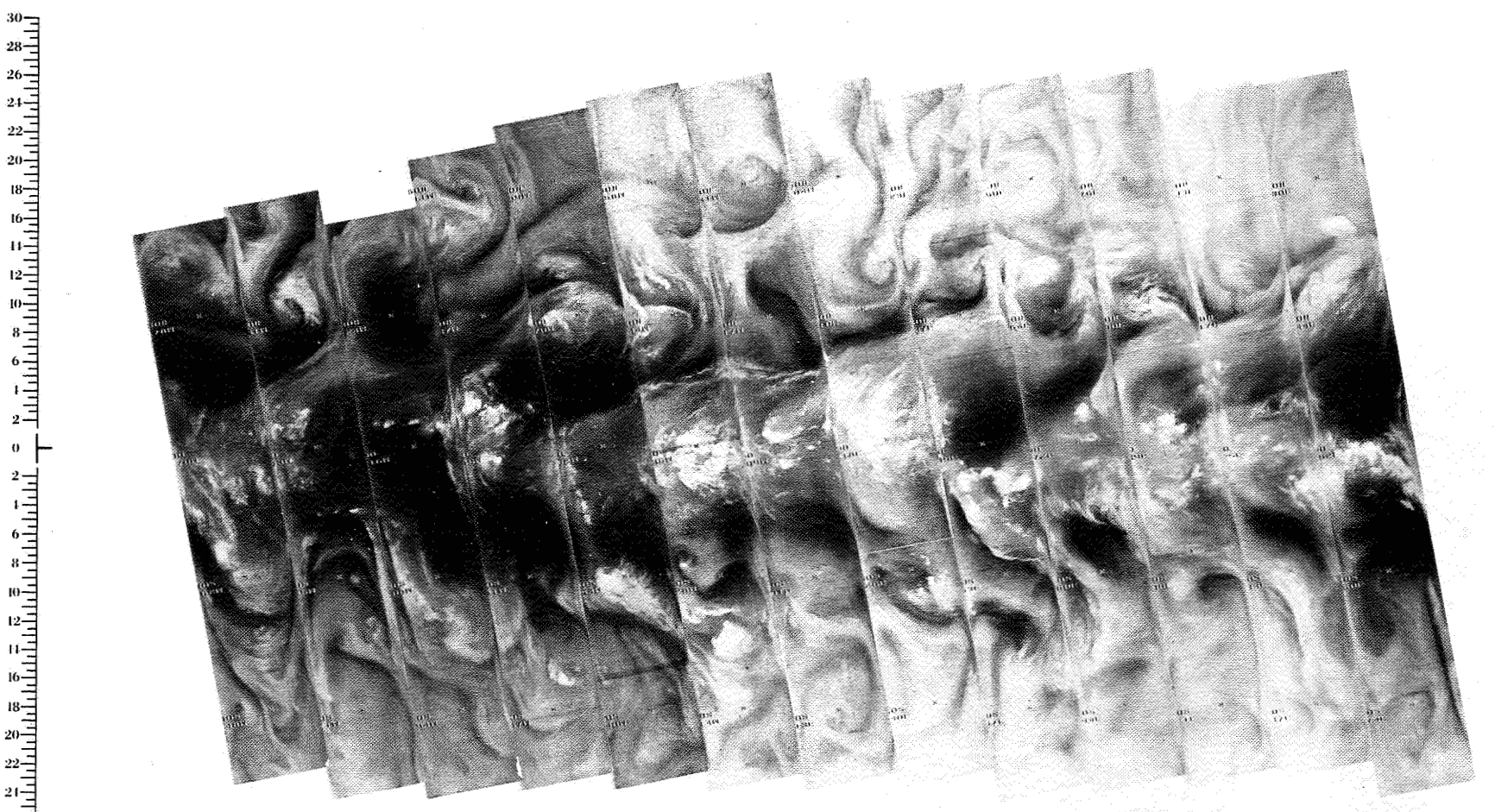
3 APRIL 1973

6.7 μm



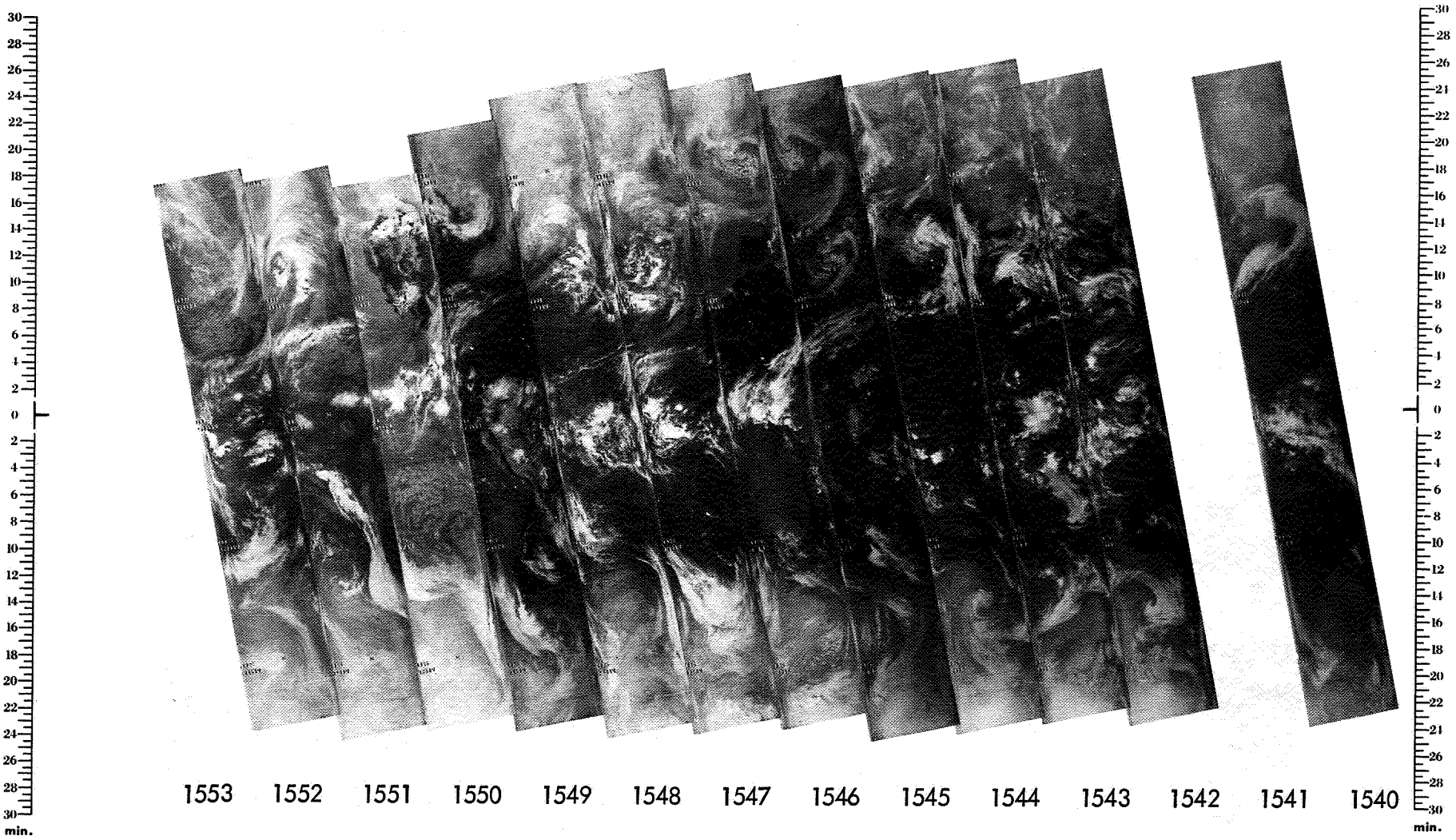
4 APRIL 1973

11.5 μm



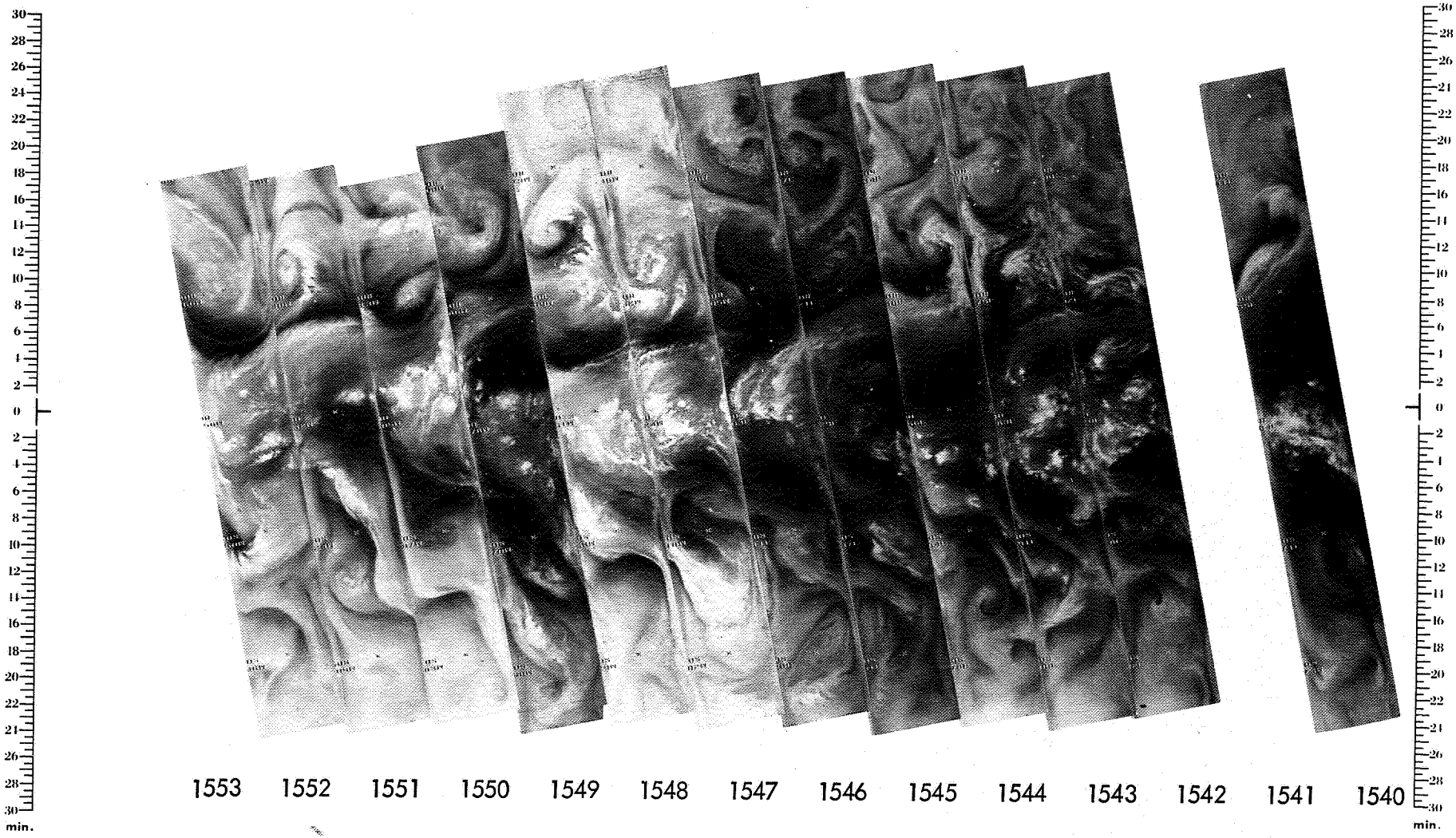
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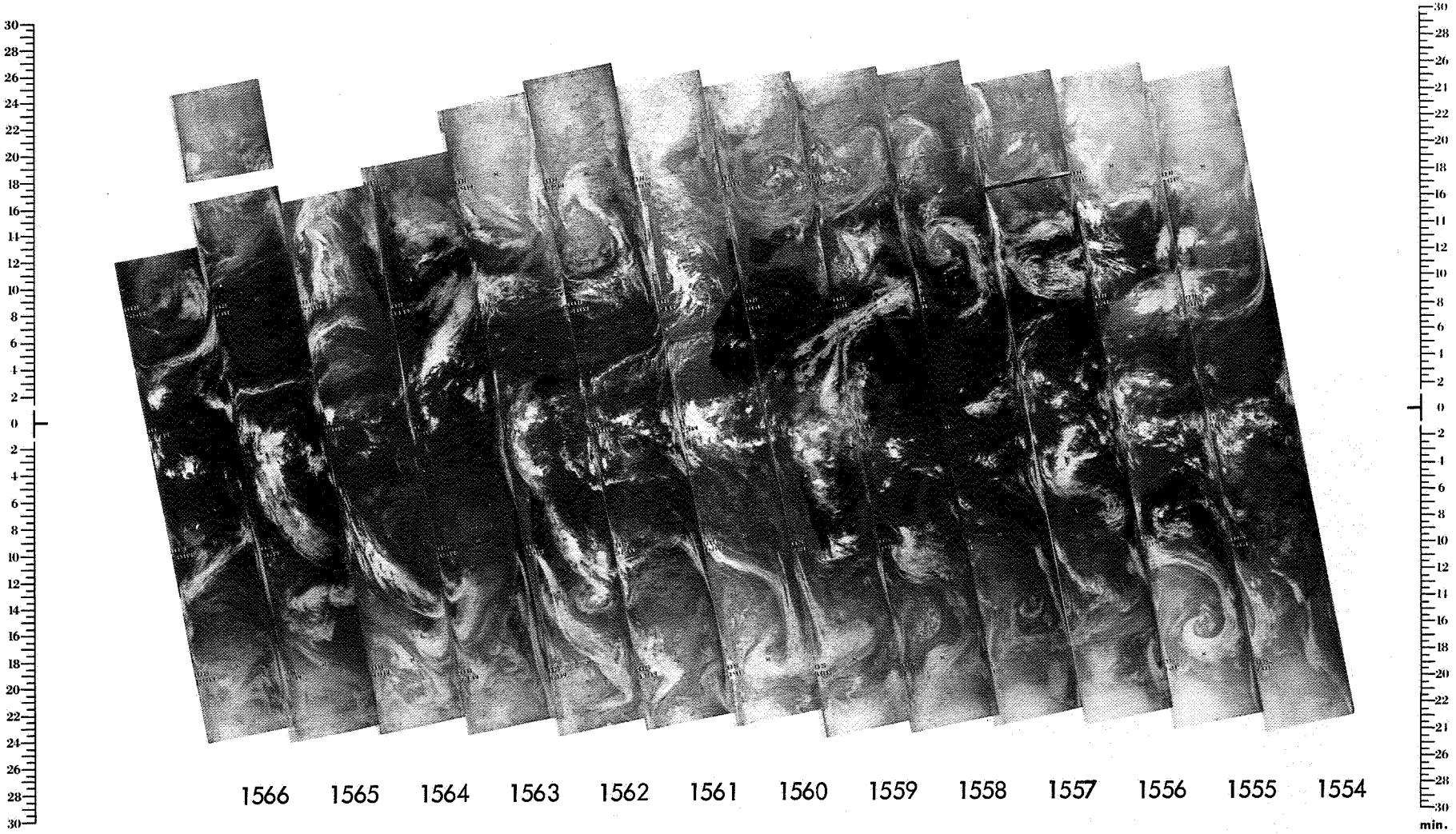
5 APRIL 1973

11.5 μm



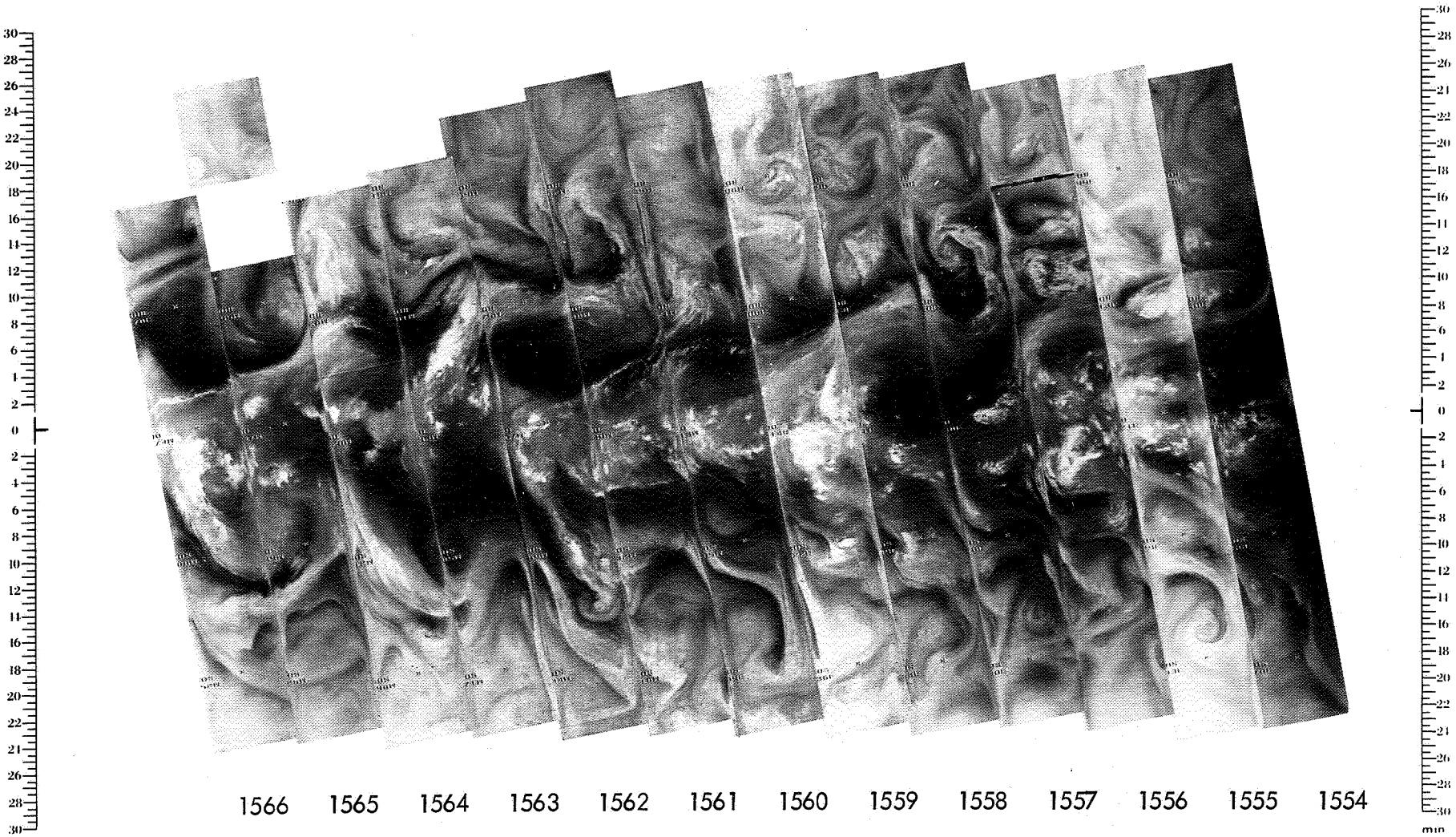
5 APRIL 18

6.7 μm



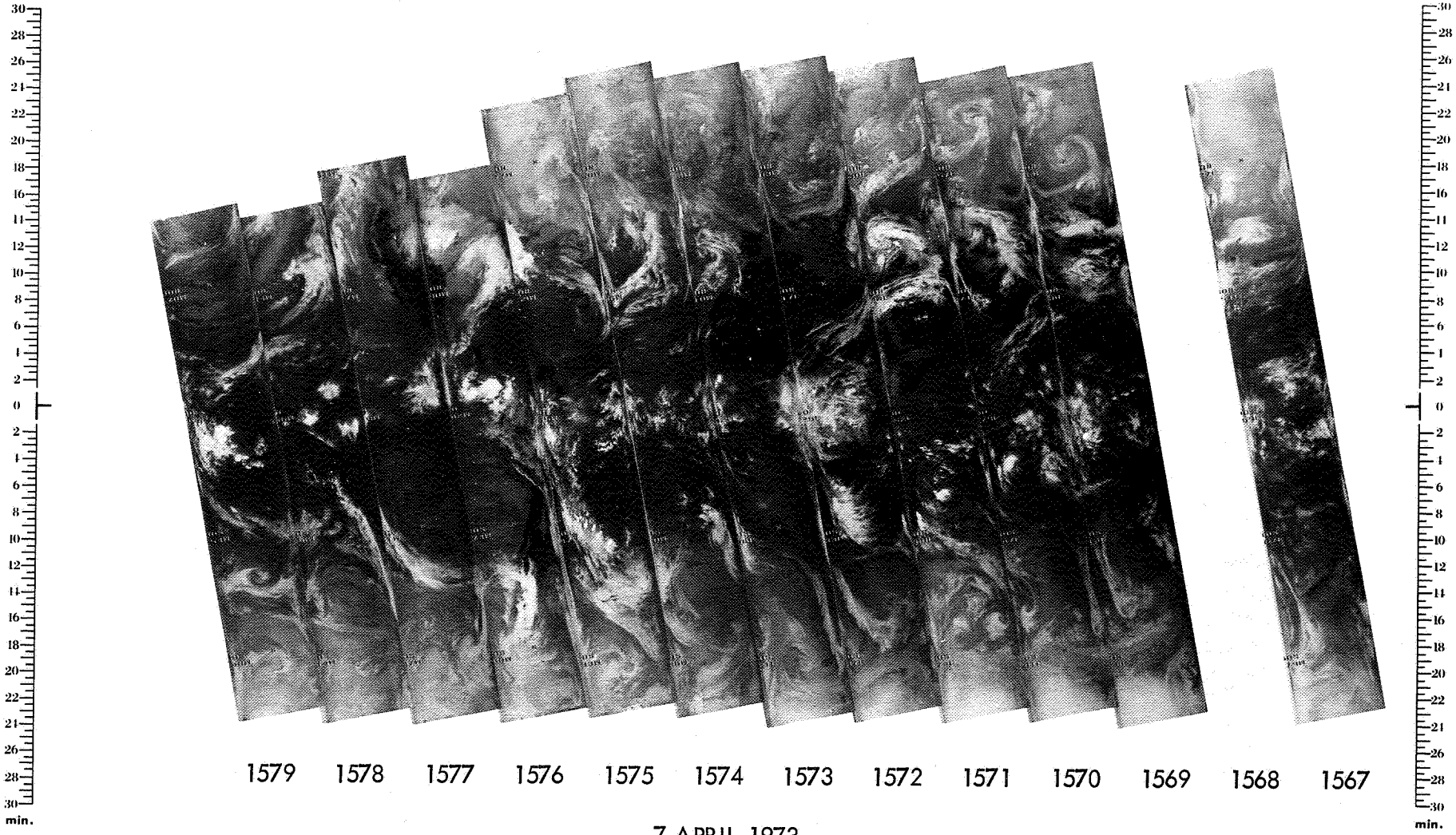
6 APRIL 1973

11.5 μm



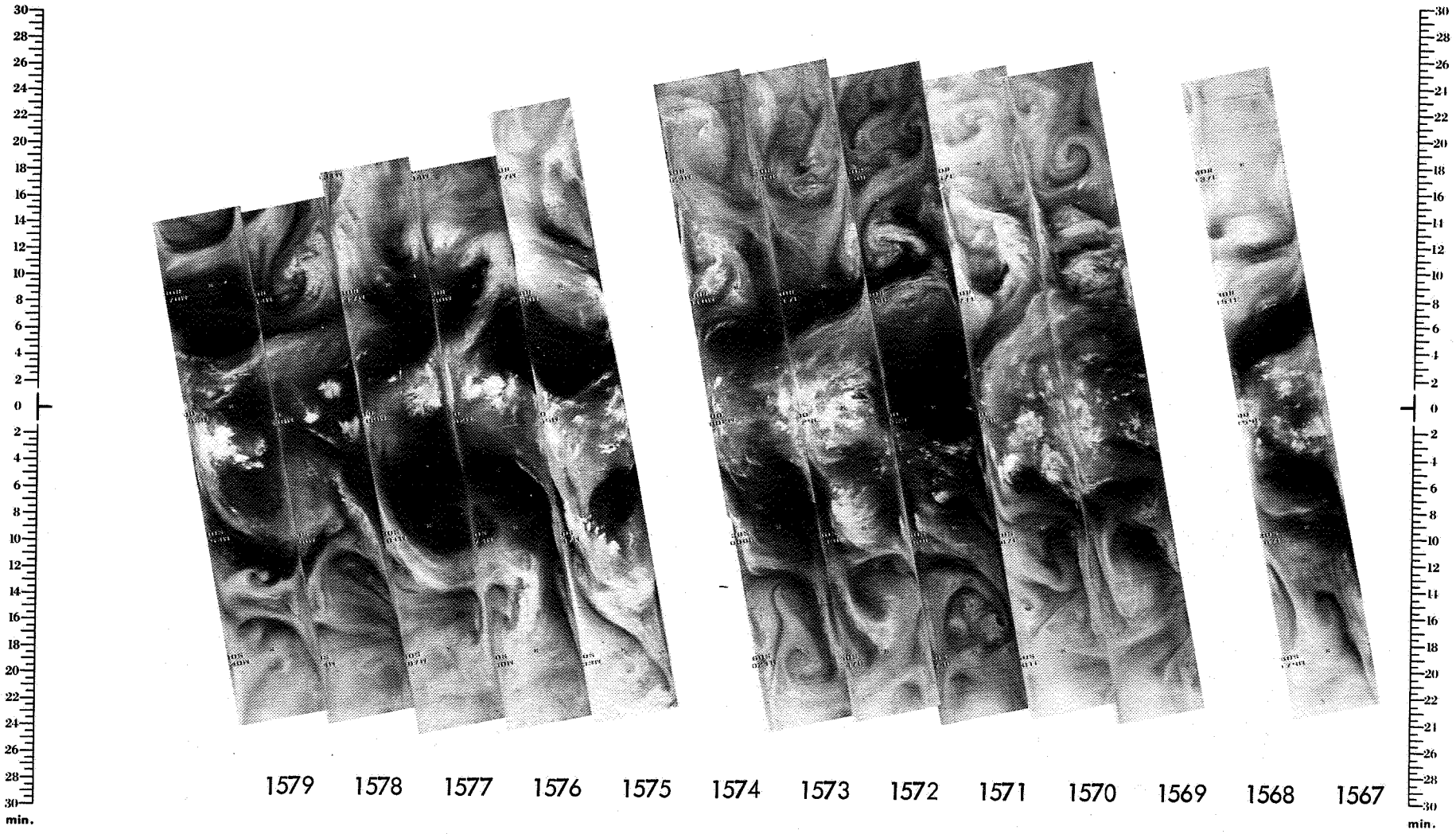
6 APRIL 1973

6.7 μm



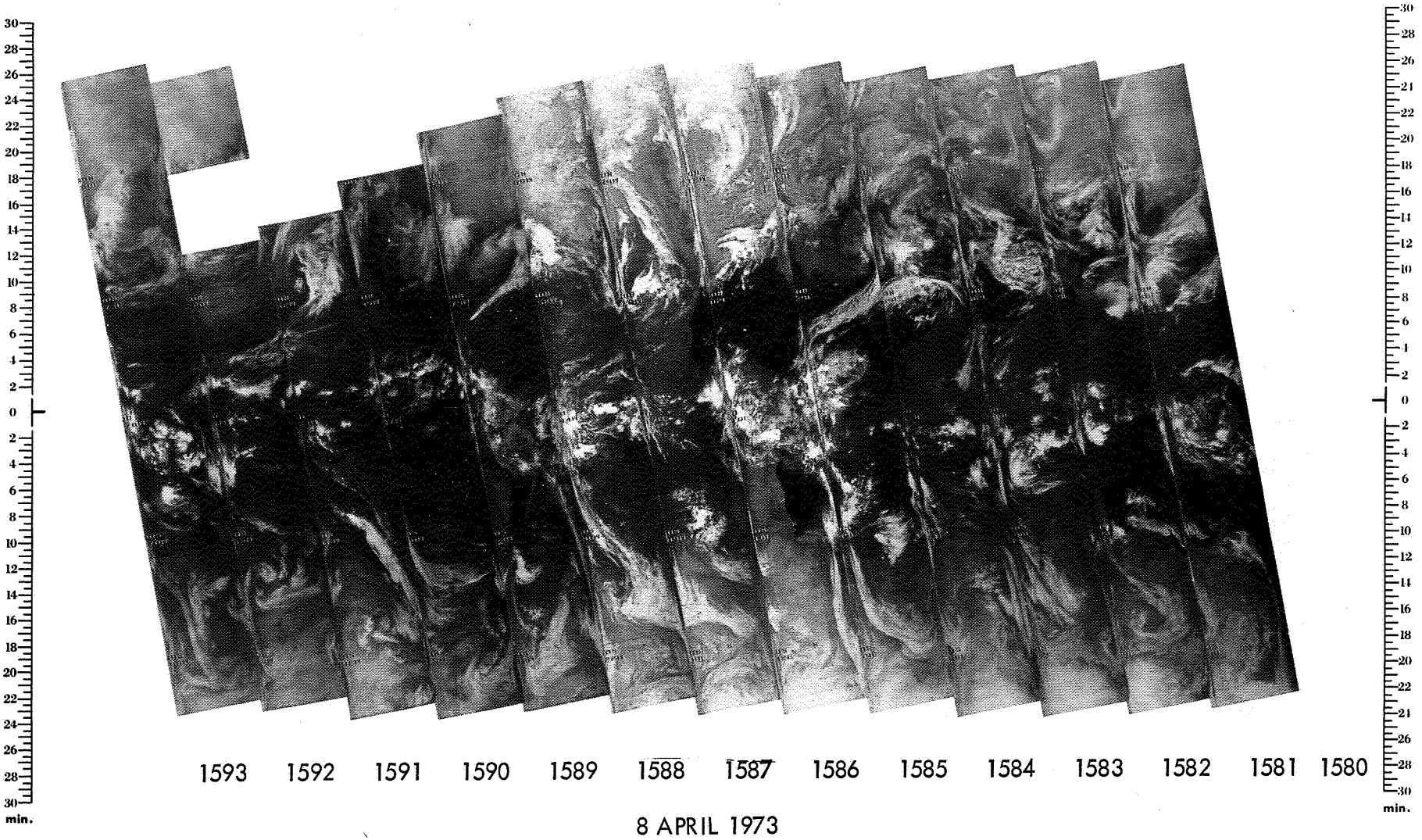
7 APRIL 1973

11.5 μm



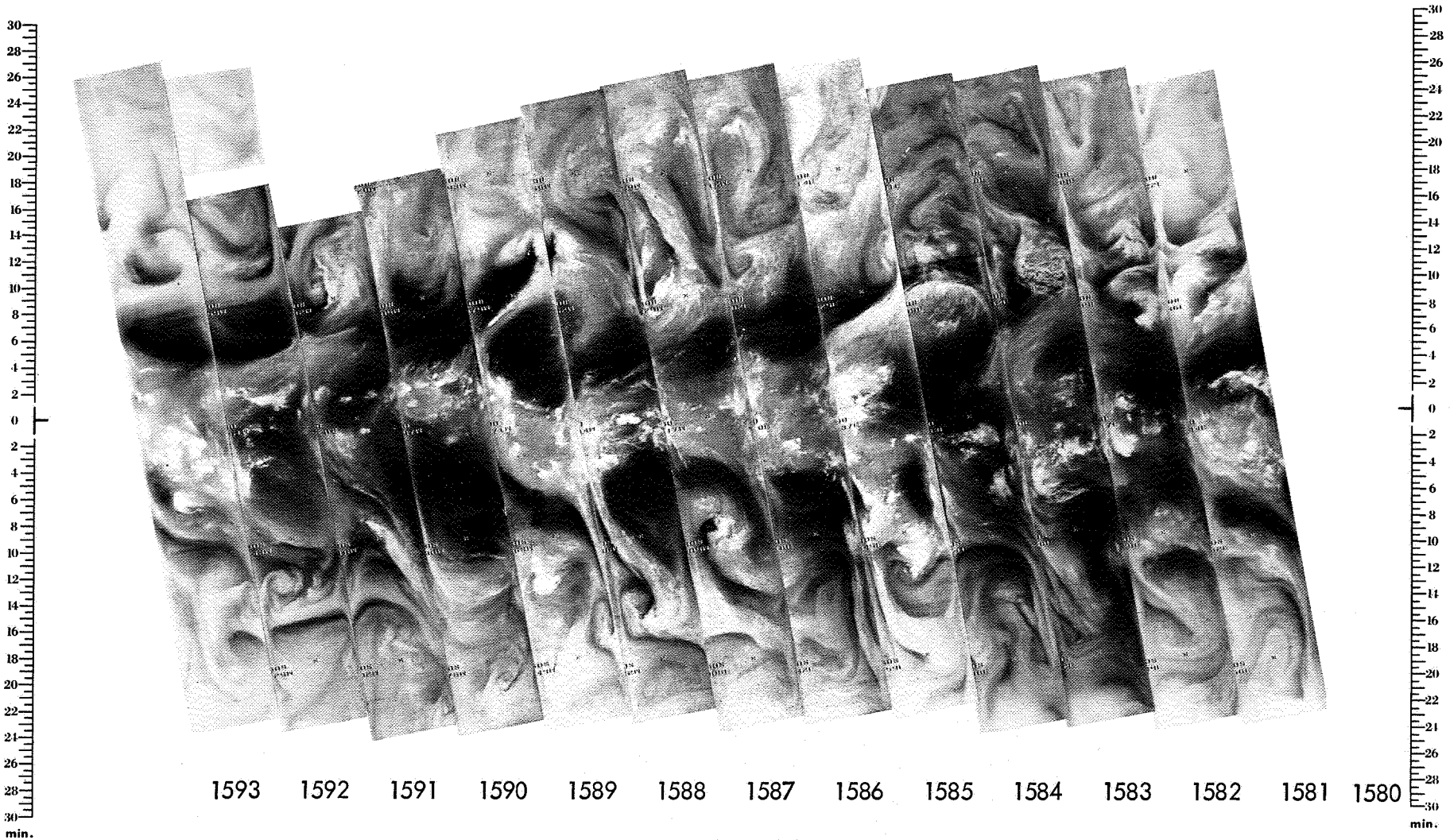
7 APRIL 1973

6.7 μm



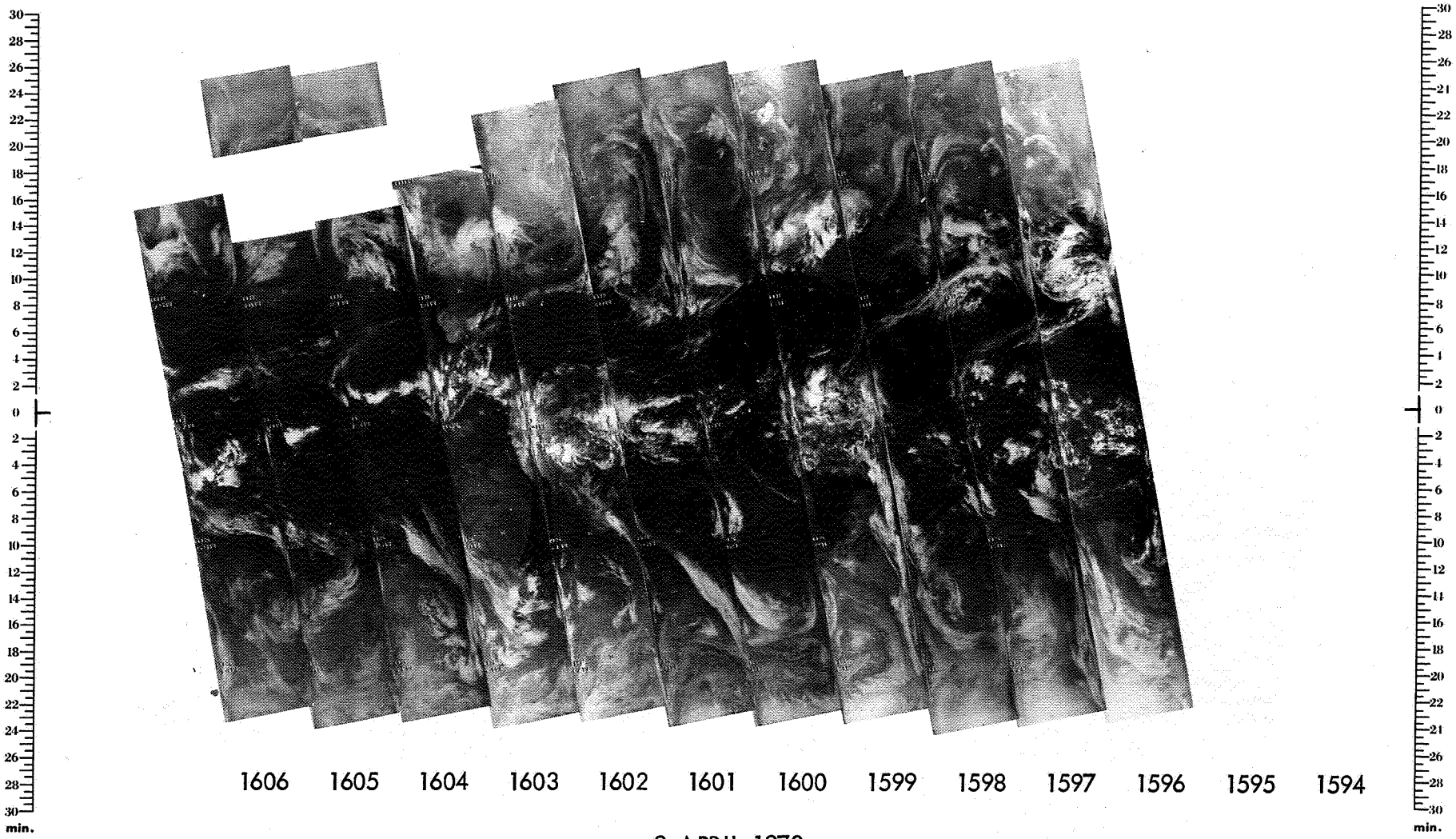
8 APRIL 1973

11.5 μm



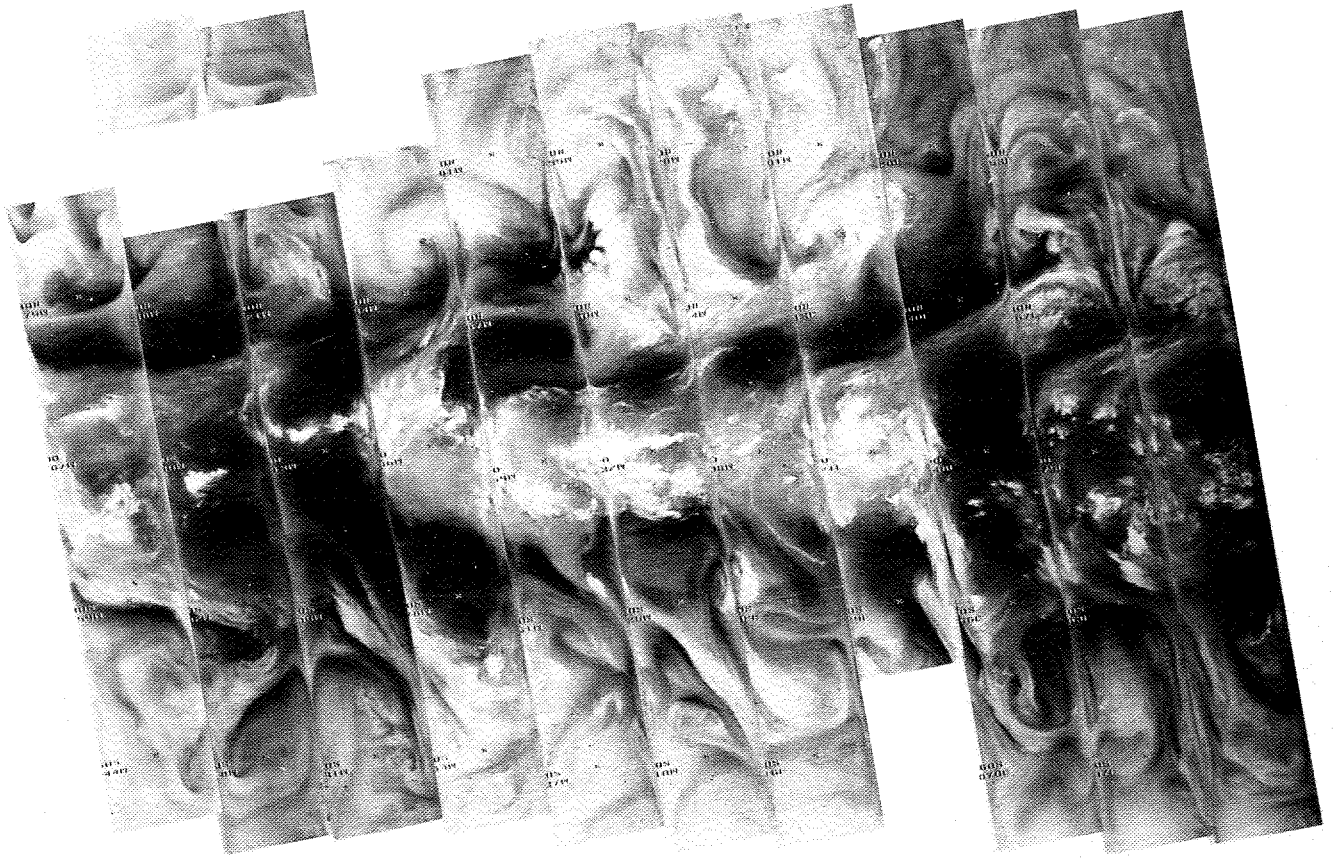
8 APRIL 1973

6.7 μm



9 APRIL 1973

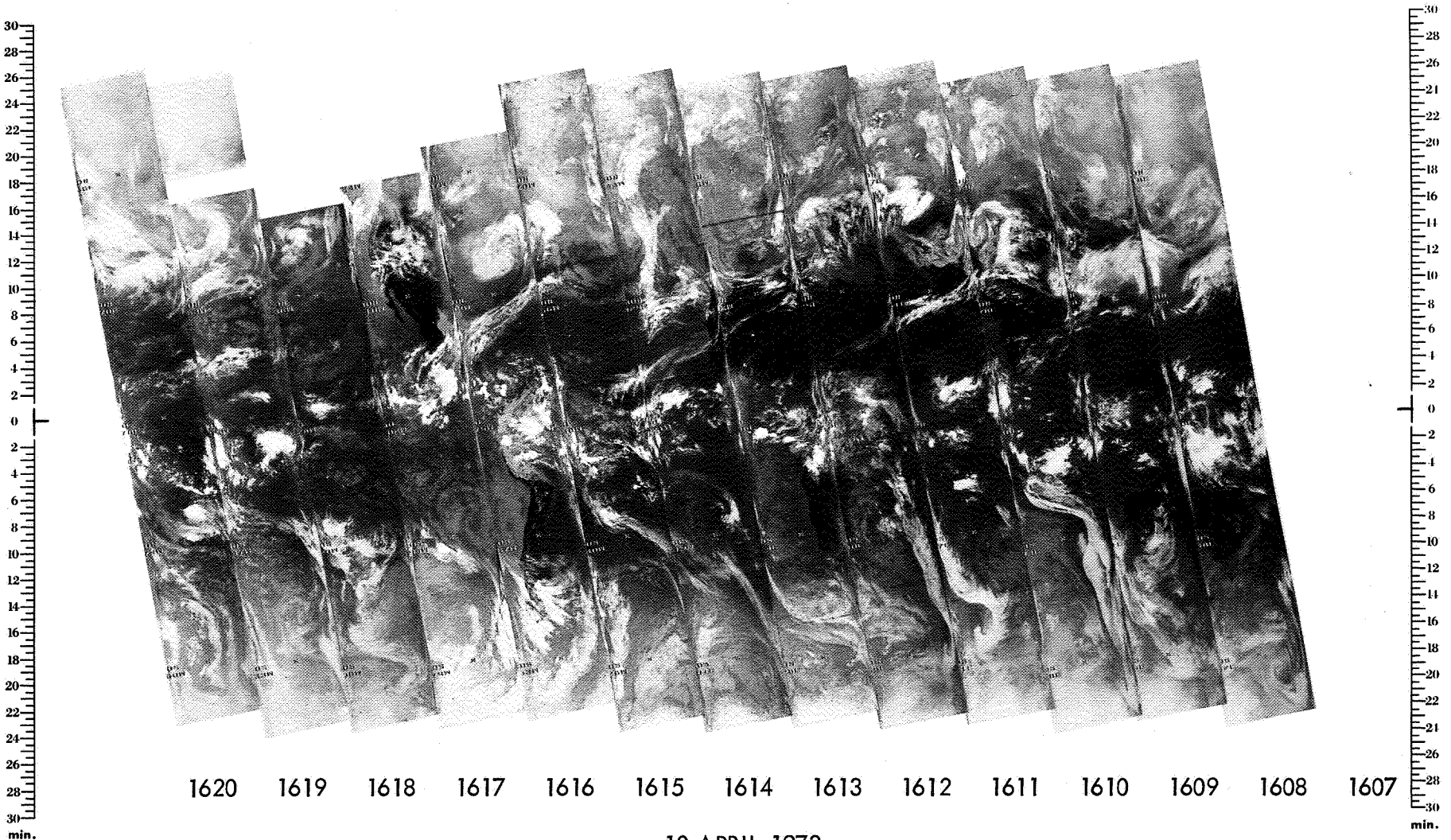
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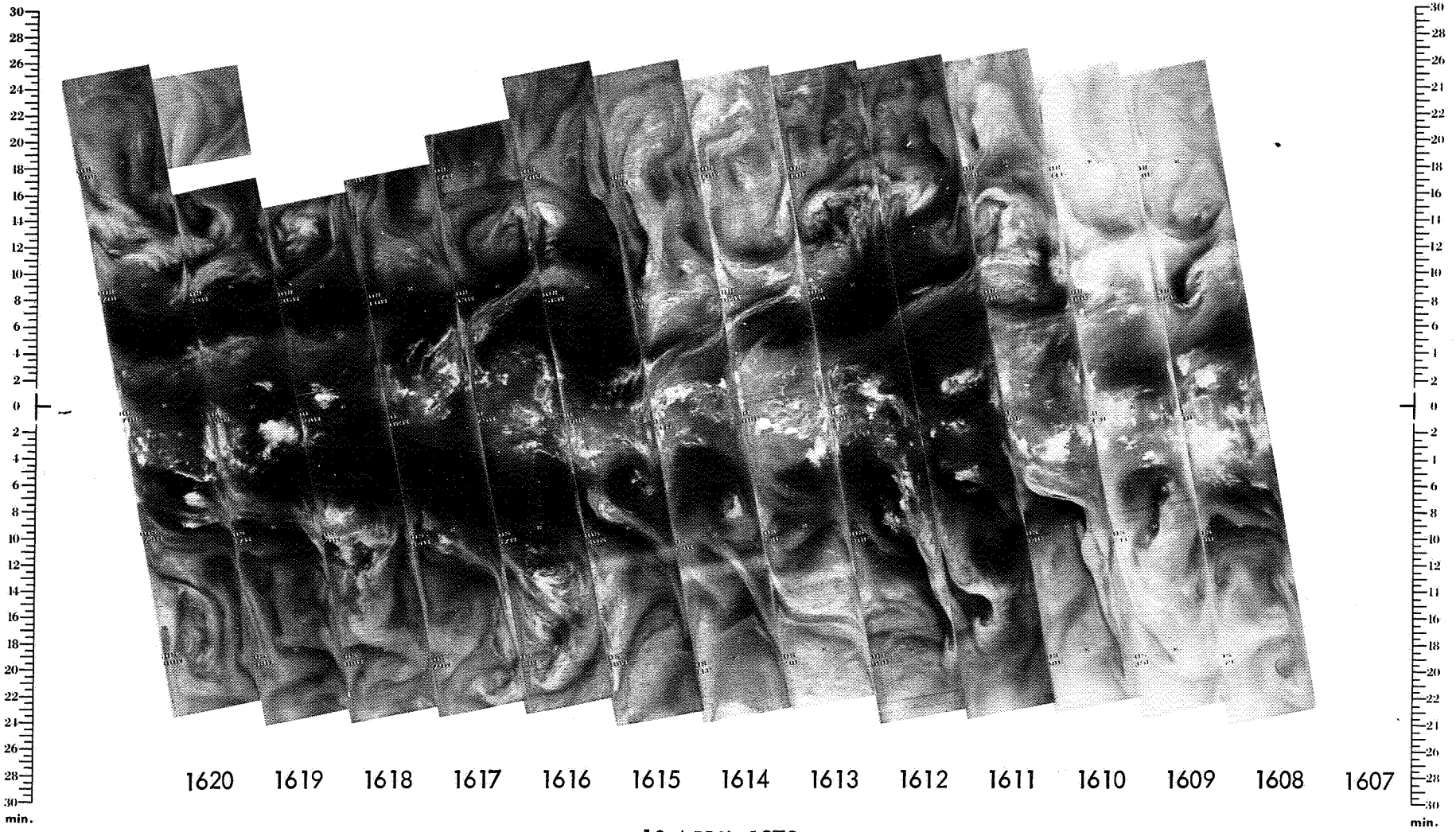


1606 1605 1604 1603 1602 1601 1600 1599 1598 1597 1596 1595 1594

9 APRIL 1973

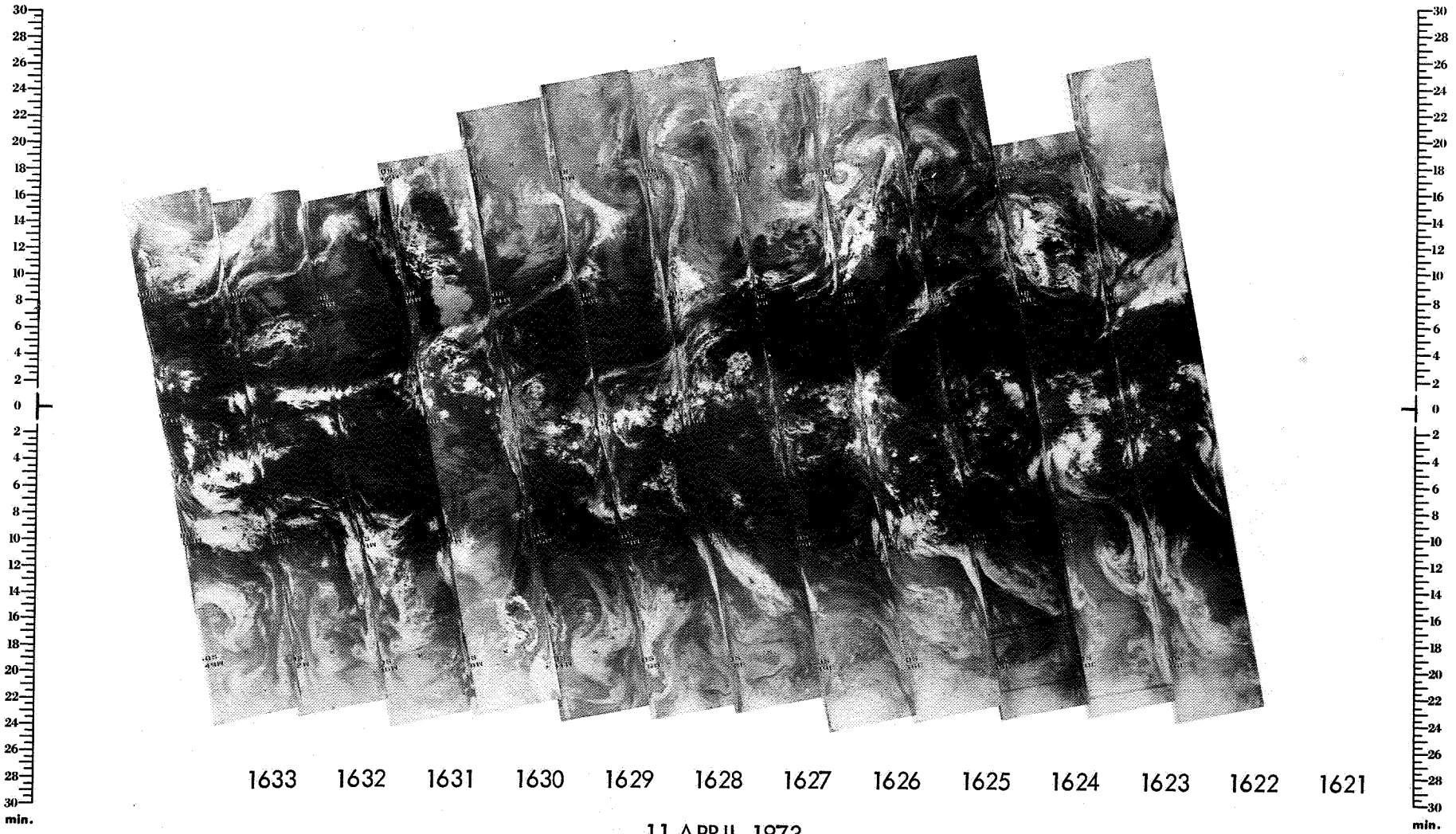
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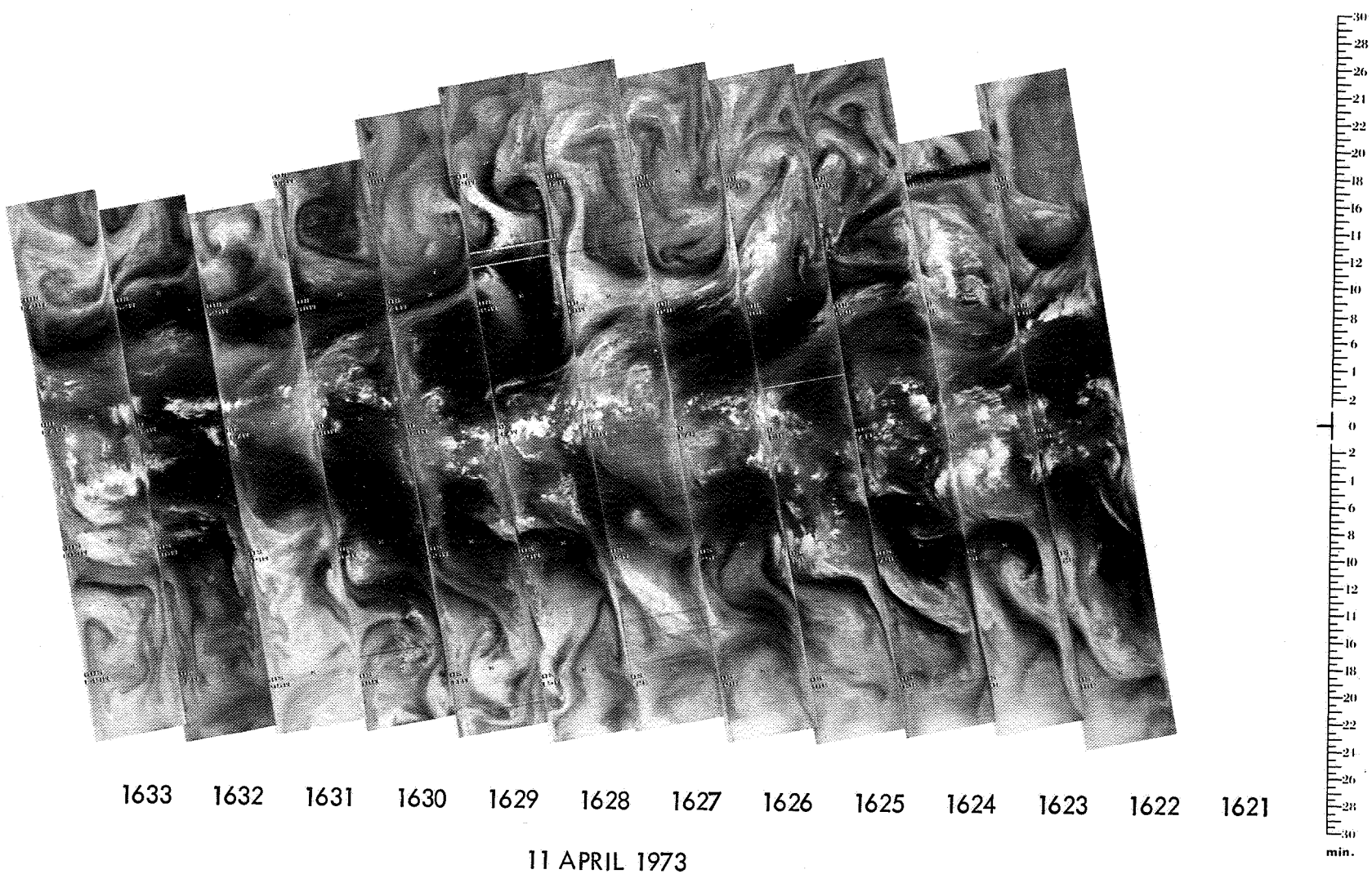

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1620 1619 1618 1617 1616 1615 1614 1613 1612 1611 1610 1609 1608 1607
10 APRIL 1973
11.5 μm

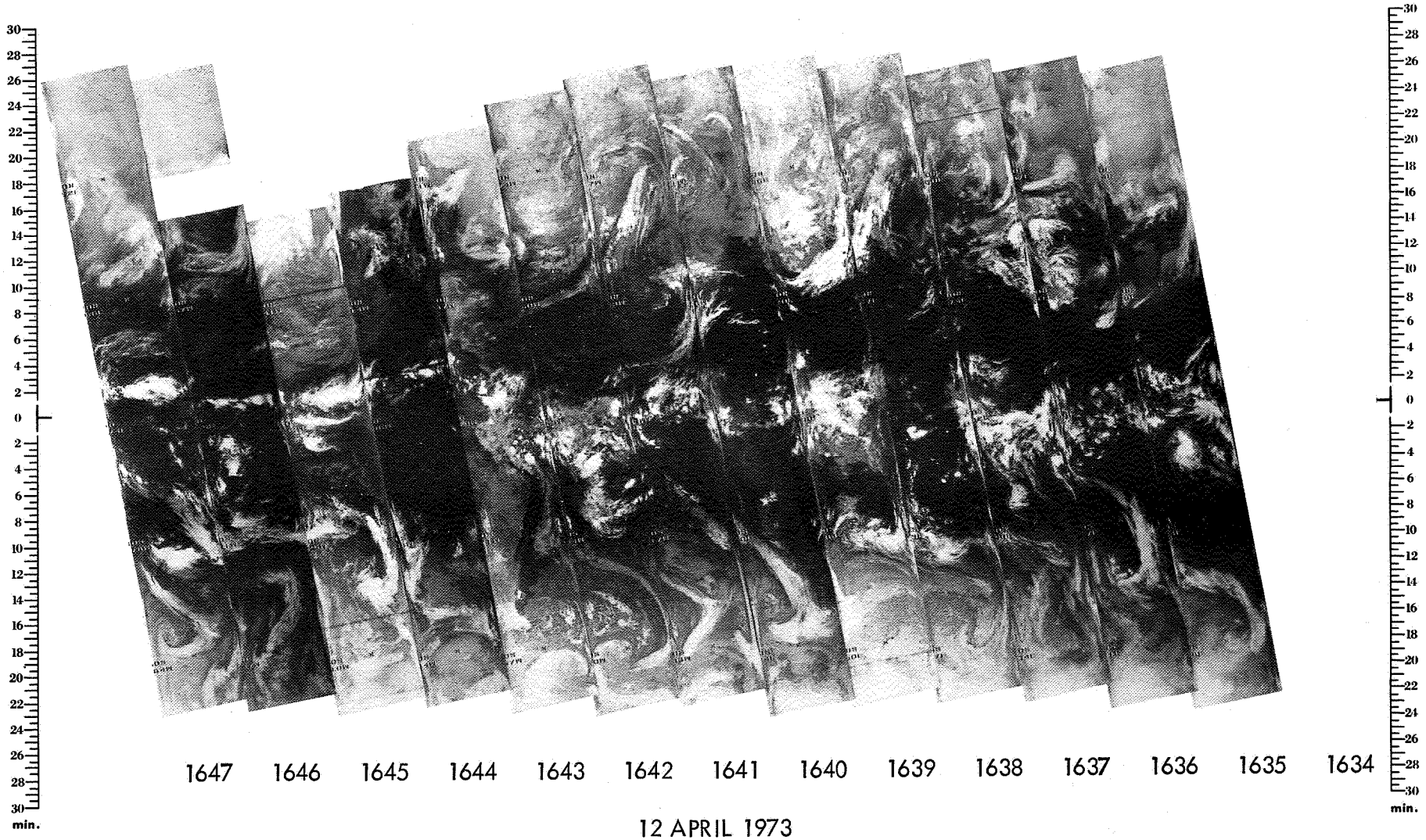


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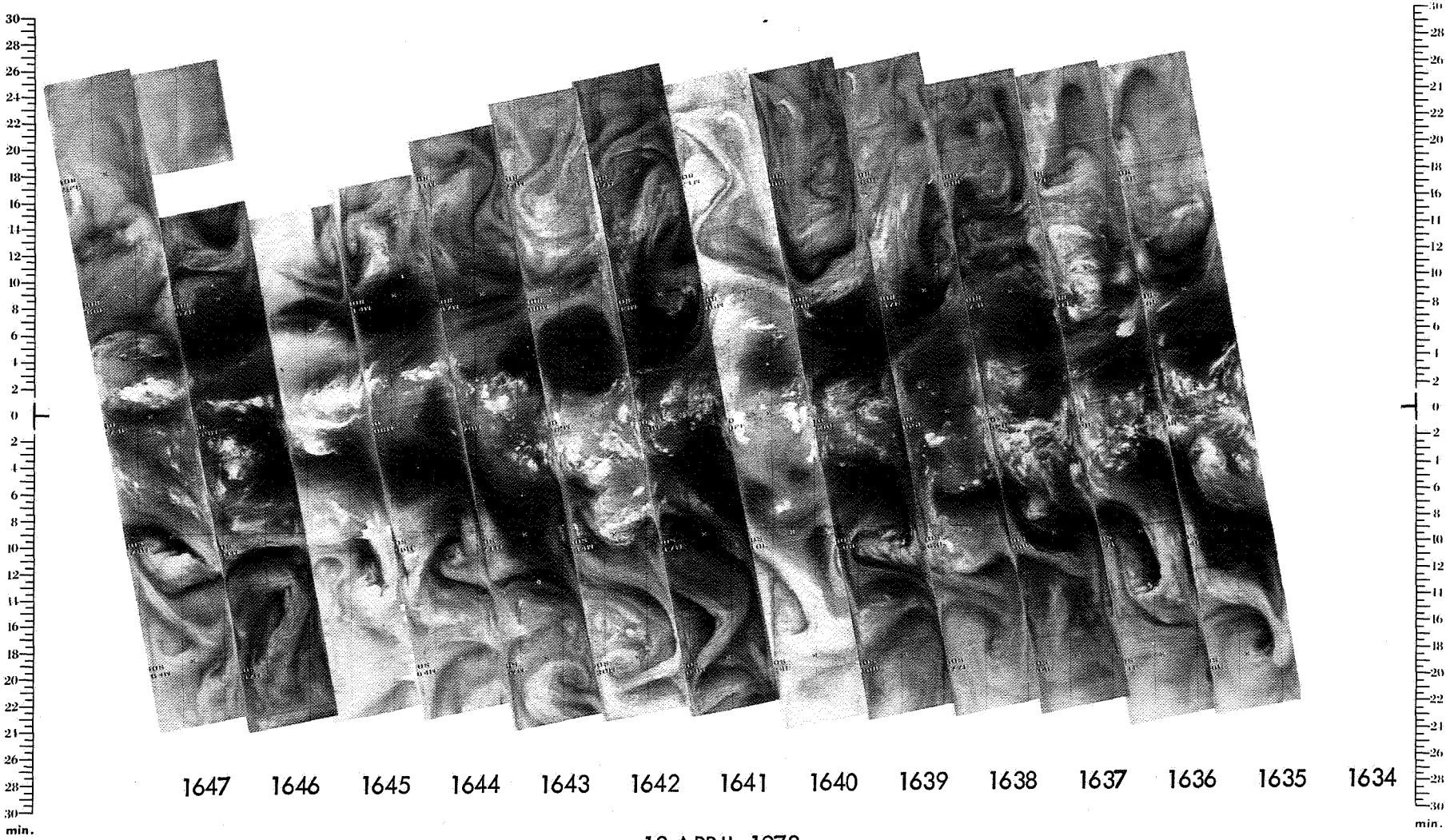

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min.
1633 1632 1631 1630 1629 1628 1627 1626 1625 1624 1623 1622 1621
11 APRIL 1973
11.5 μm


1633
1632
1631
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1623
1622
1621
11 APRIL 1973
6.7 μm
min.
min.



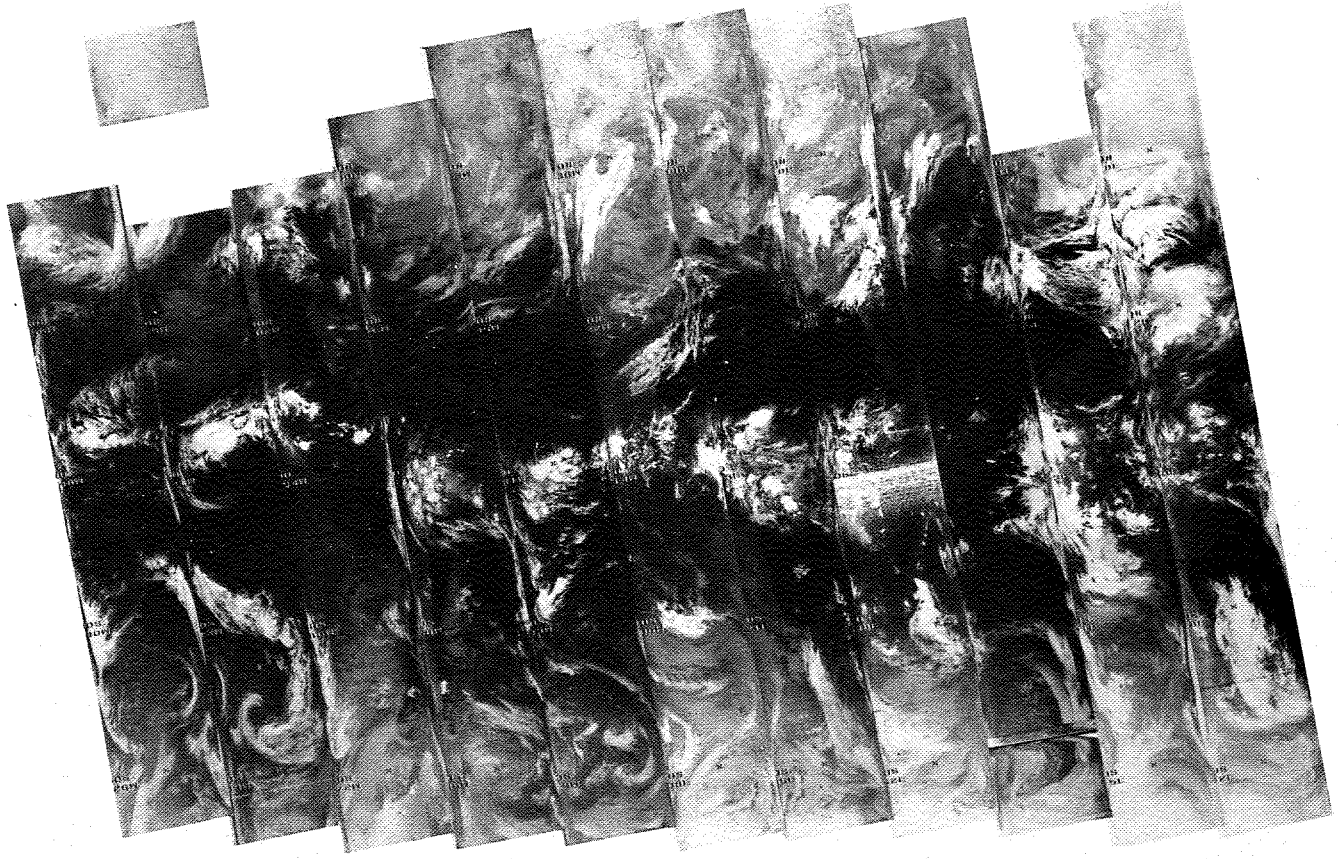
12 APRIL 1973

11.5 μm



12 APRIL 1973

6.7 μm



1660 1659 1658 1657 1656 1655 1654 1653 1652 1651 1650 1649 1648

13 APRIL 1973

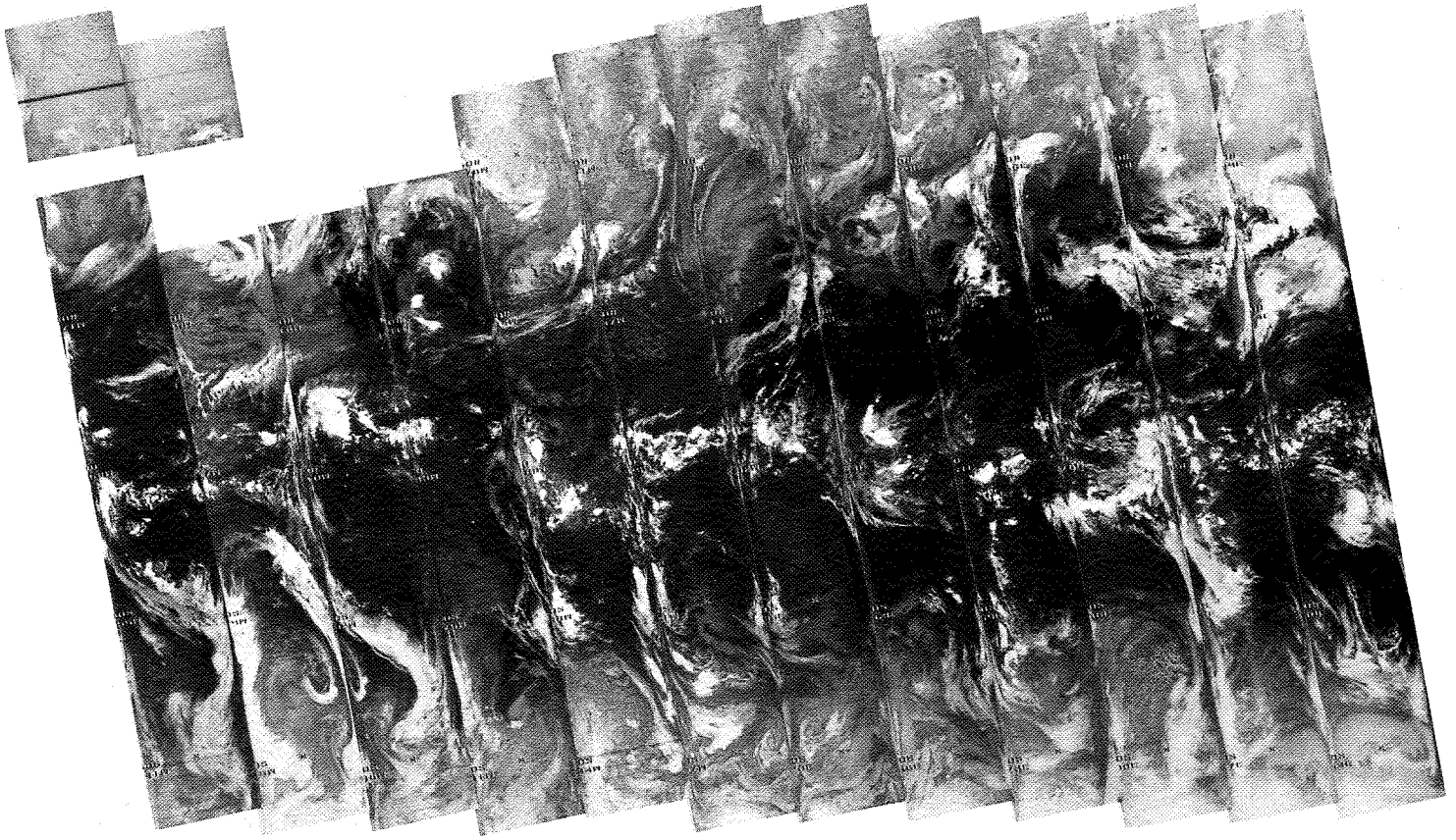
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13 APRIL 1973

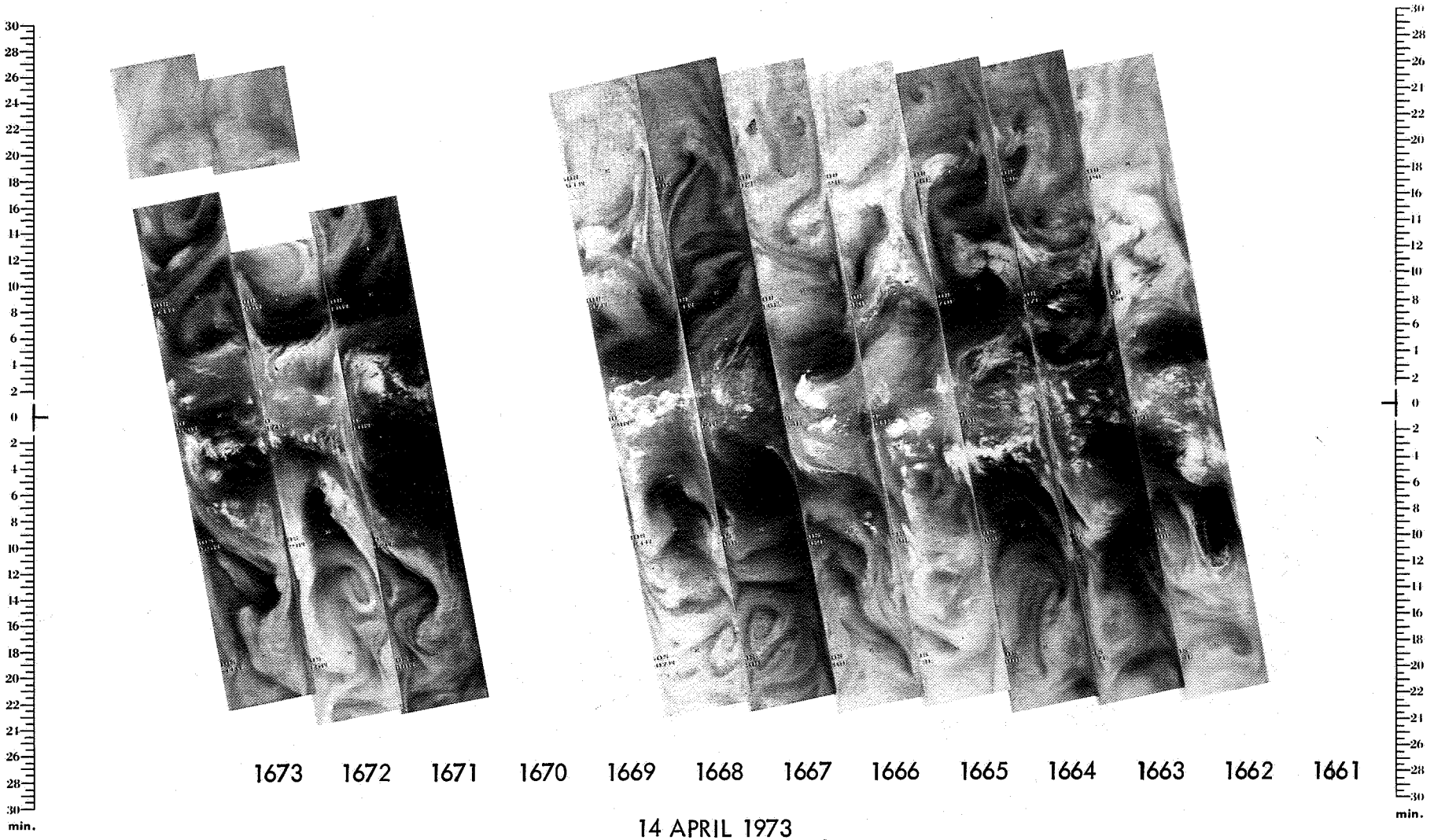
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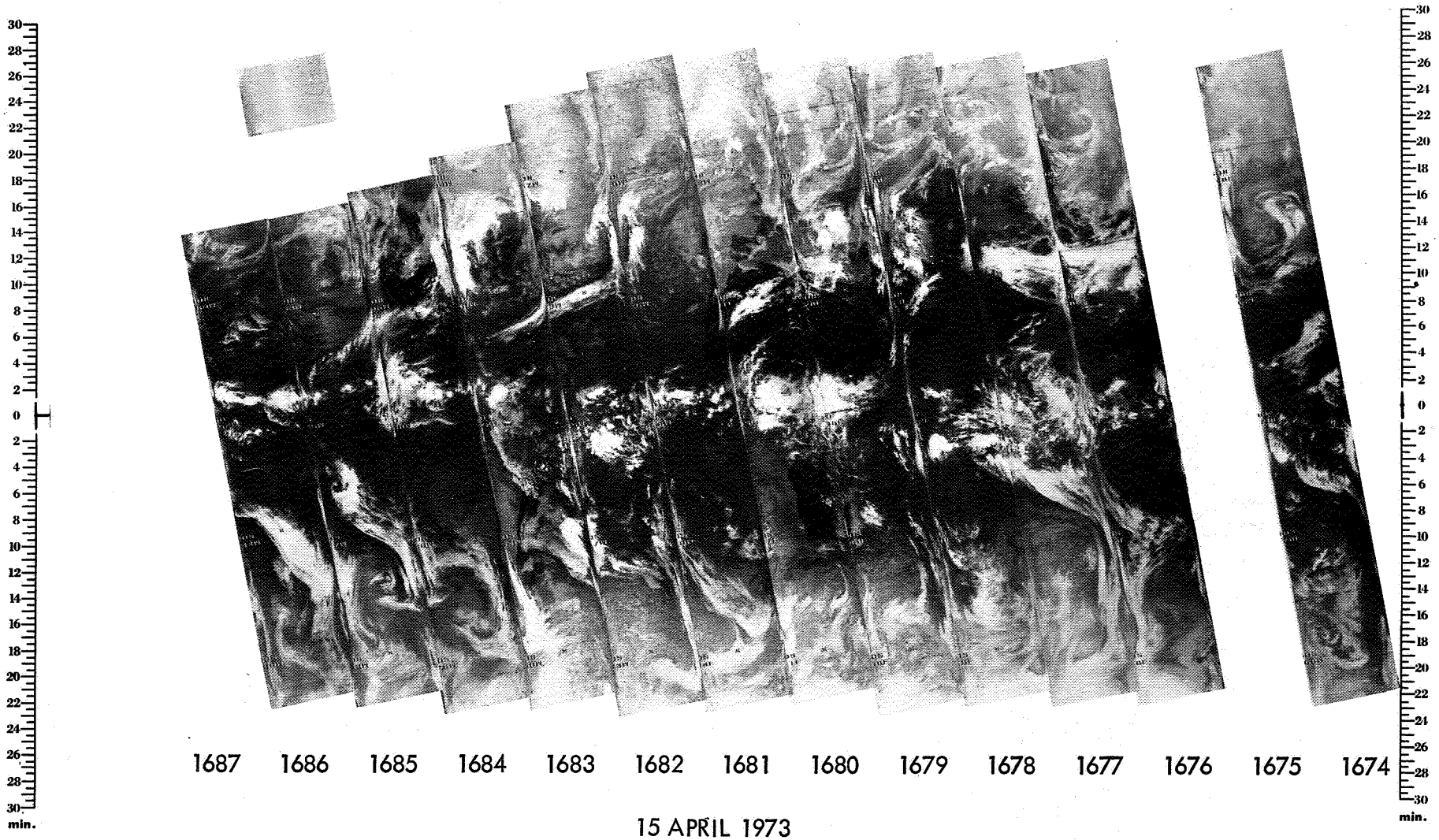
14 APRIL 1973

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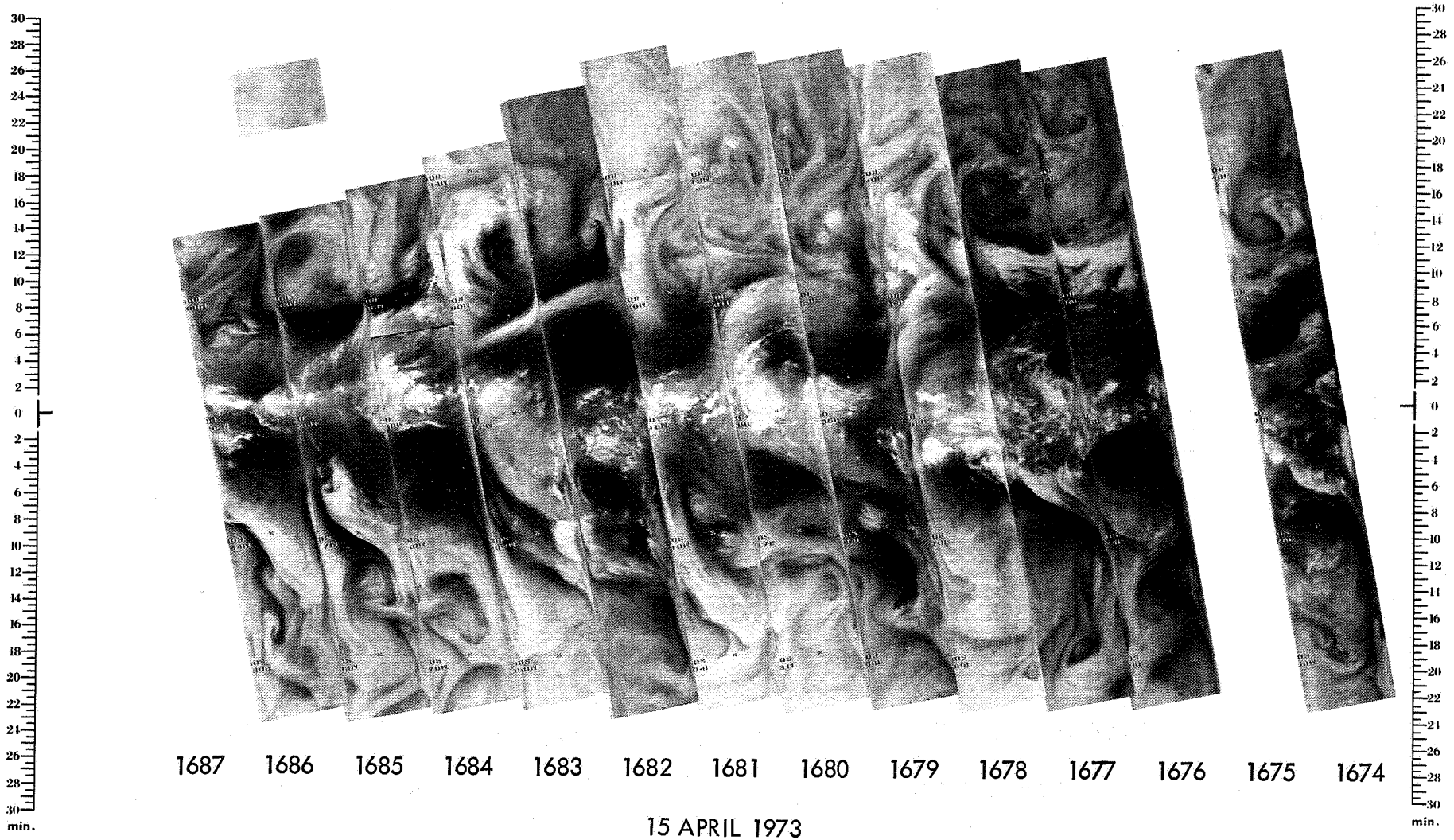
14 APRIL 1973

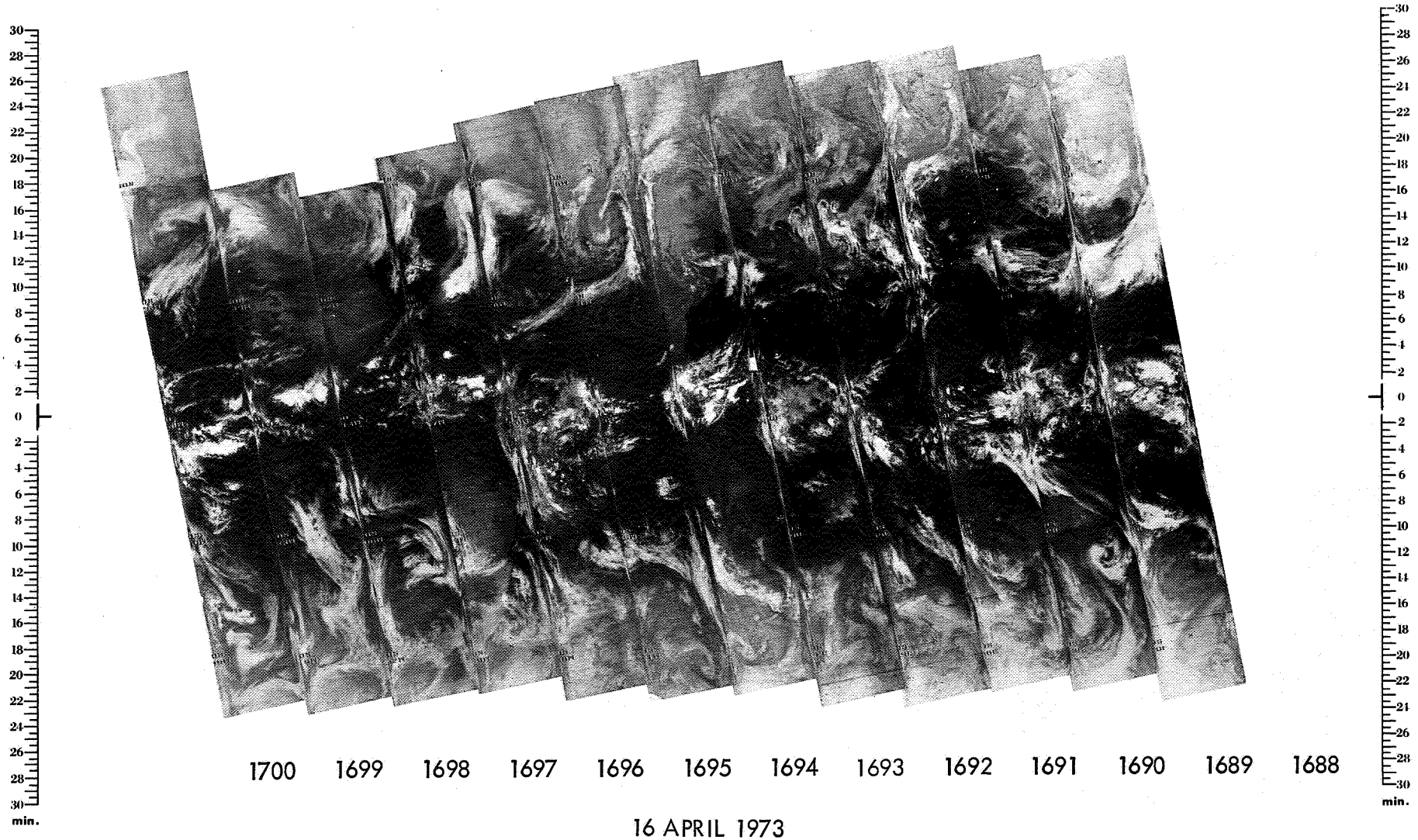
6.7 μm



15 APRIL 1973

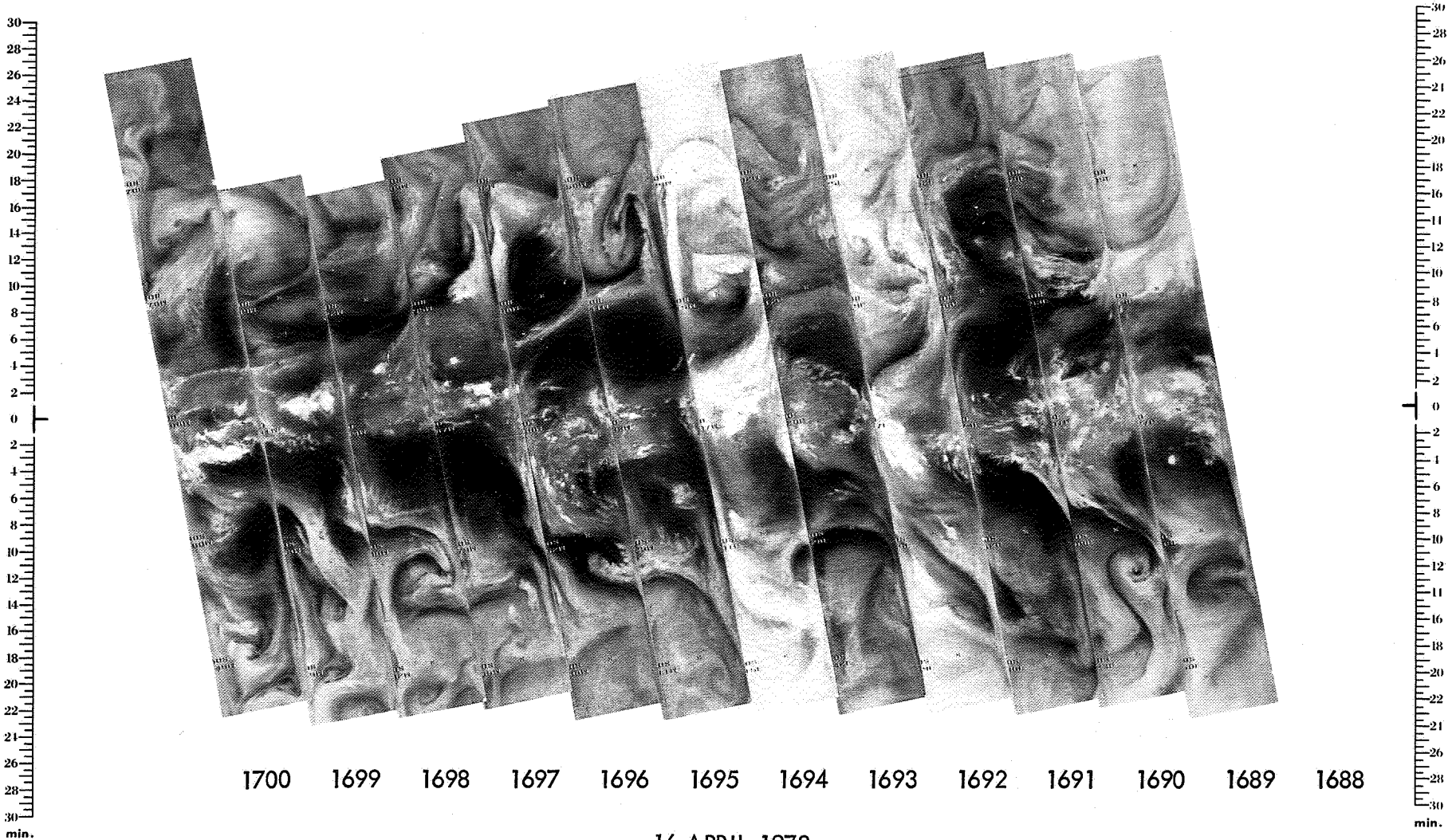
11.5 μm


1687
1686
1685
1684
1683
1682
1681
1680
1679
1678
1677
1676
1675
1674
15 APRIL 1973
6.7 μm
min.
min.



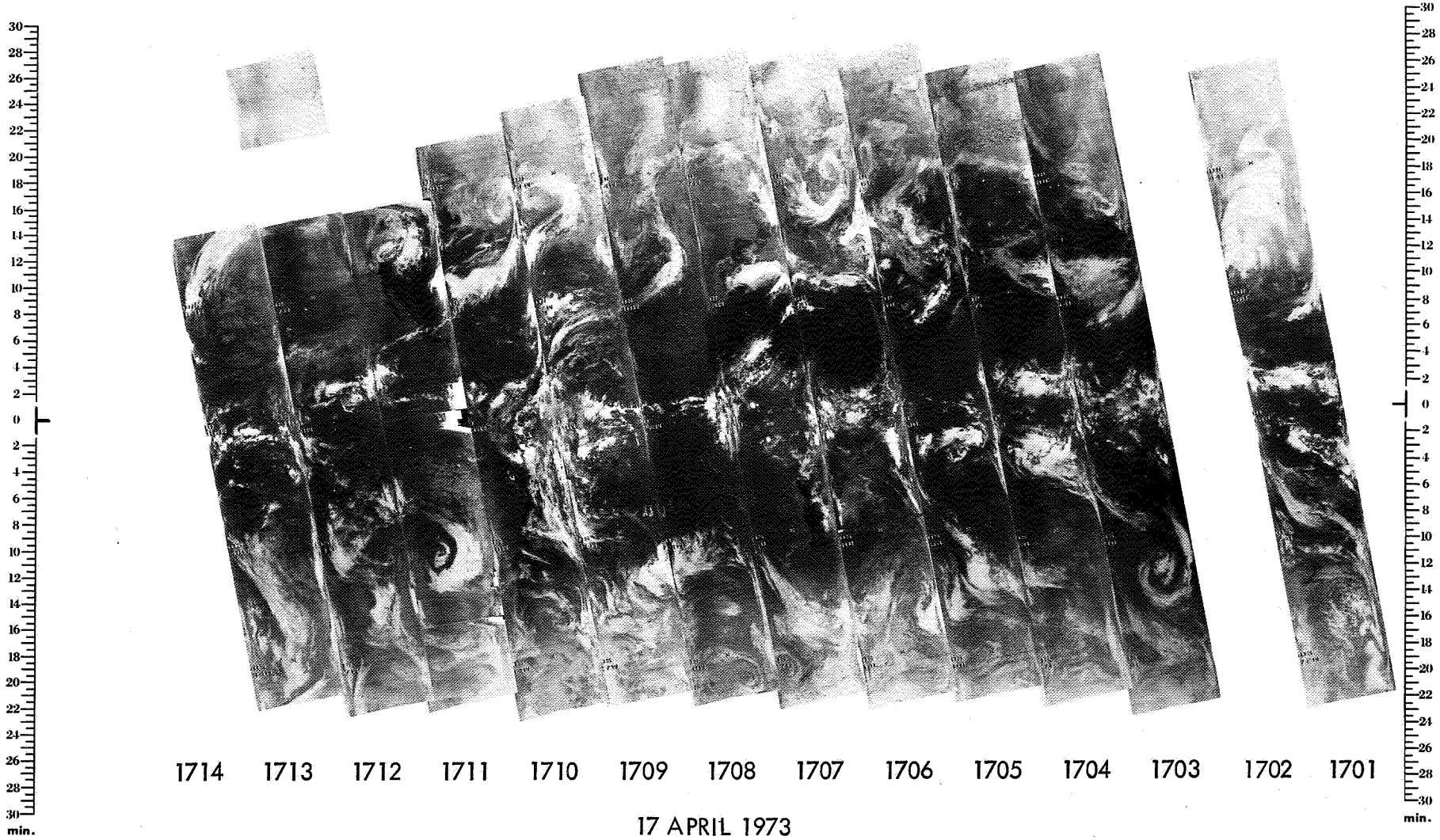
16 APRIL 1973

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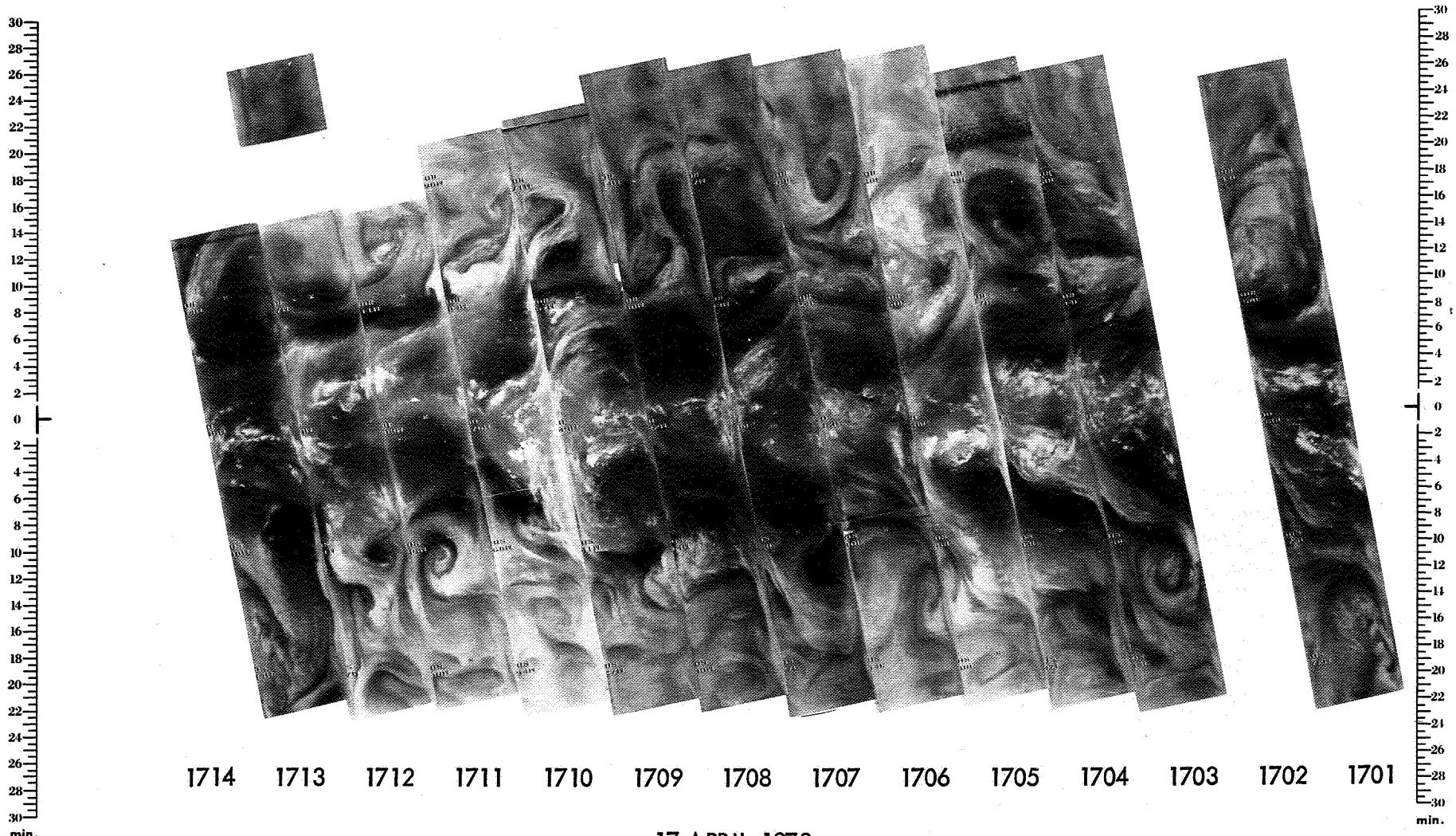
16 APRIL 1973

6.7 μm



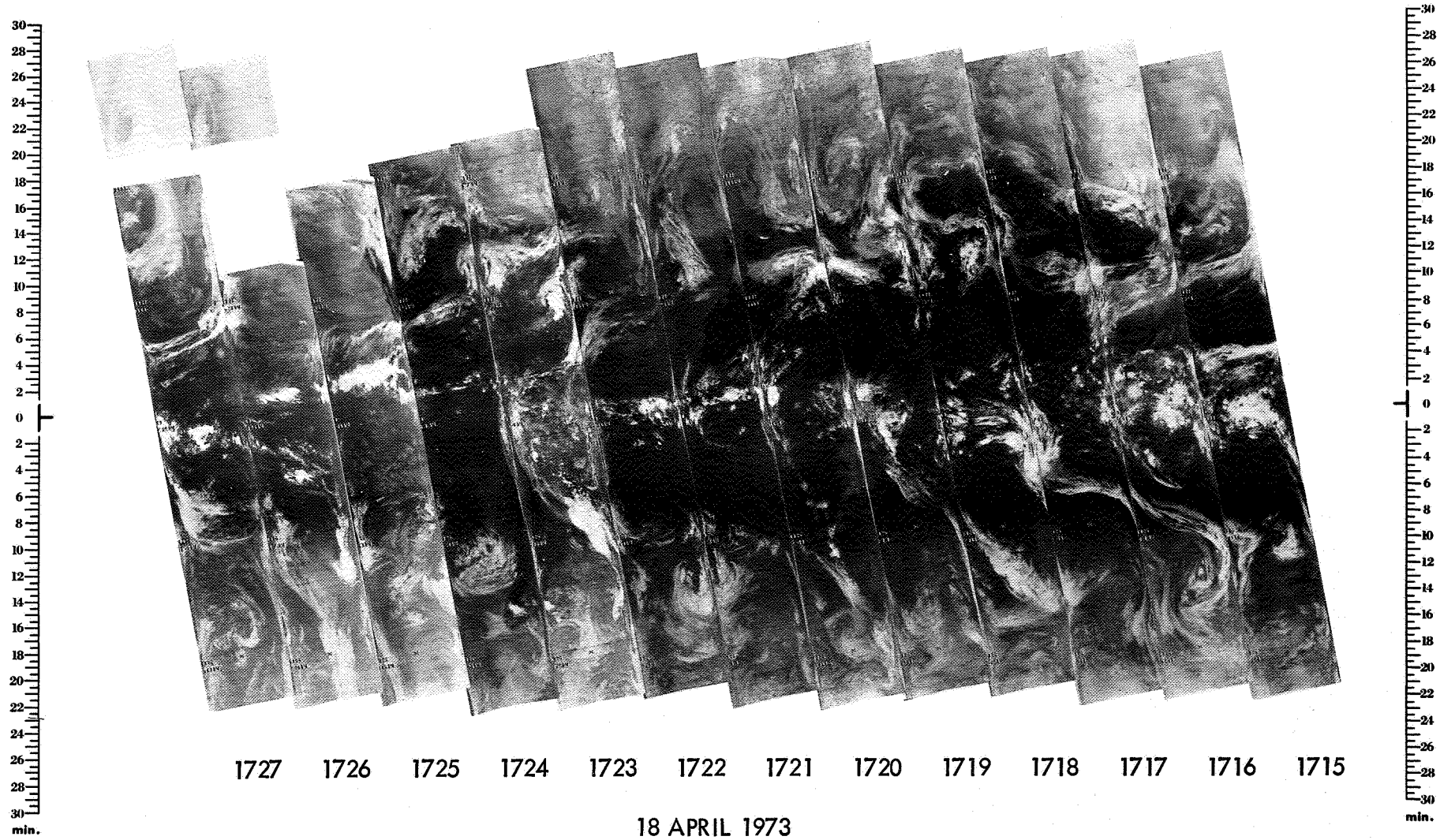
17 APRIL 1973

11.5 μm



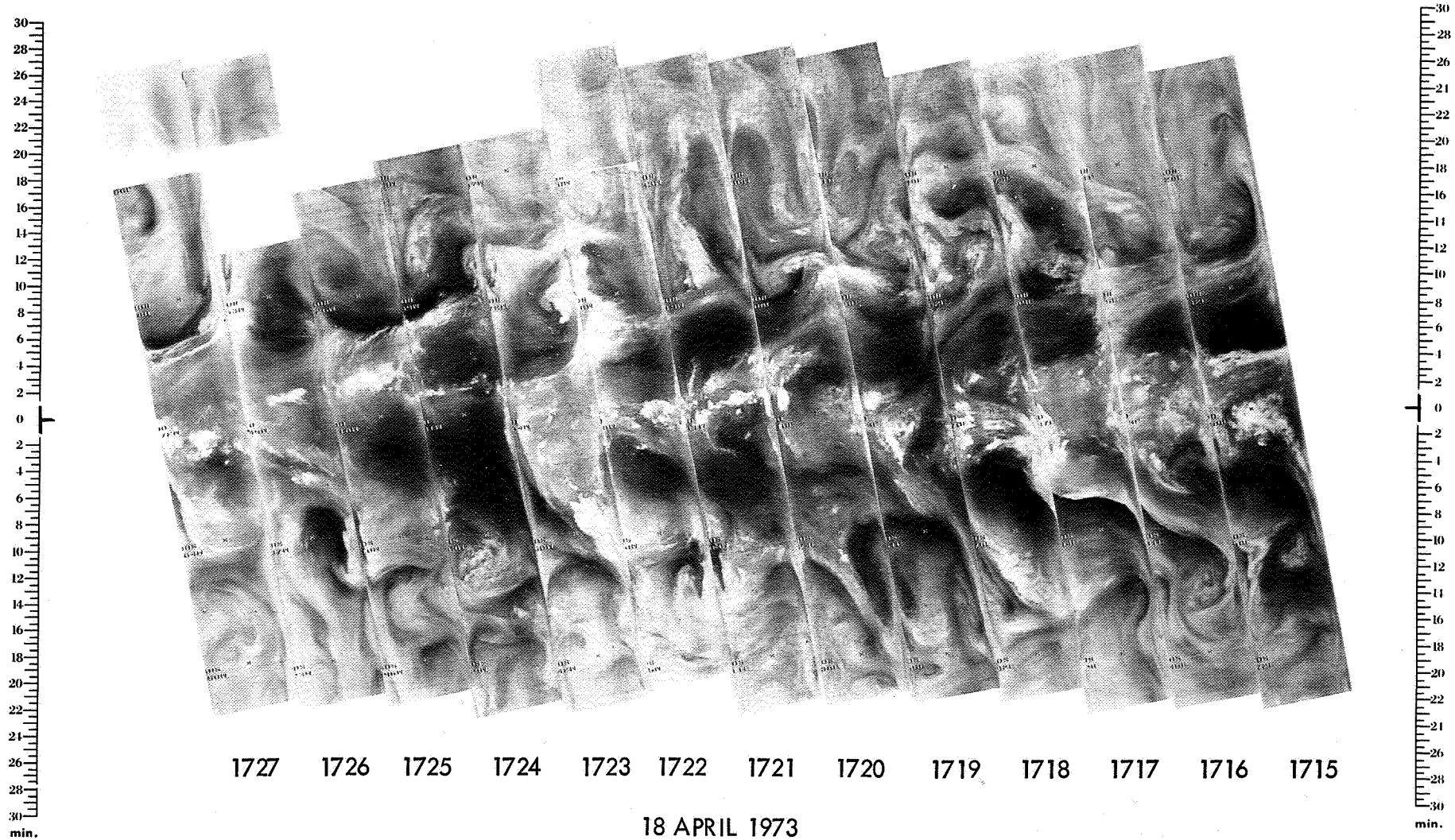
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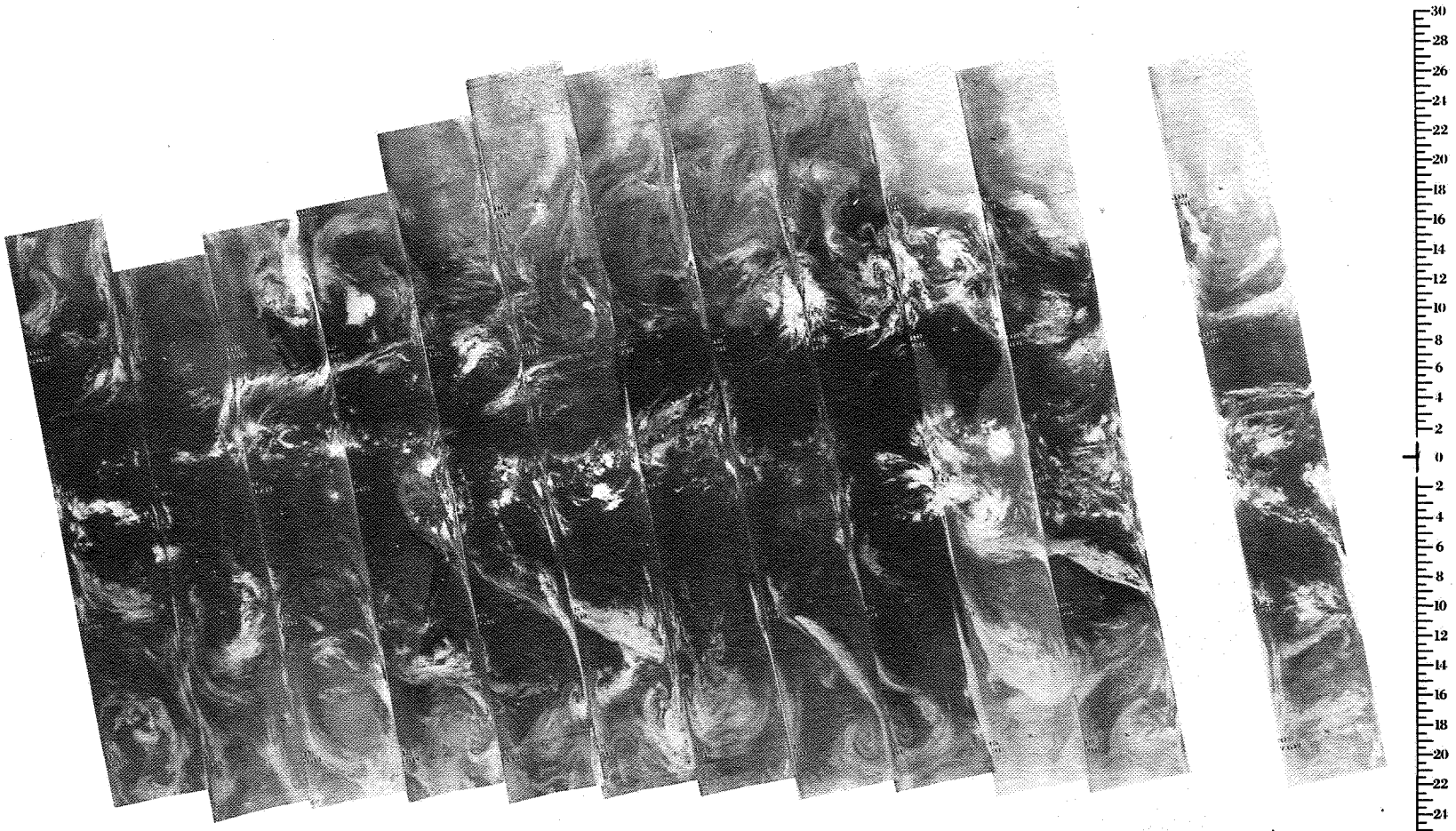
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18 APRIL 1973

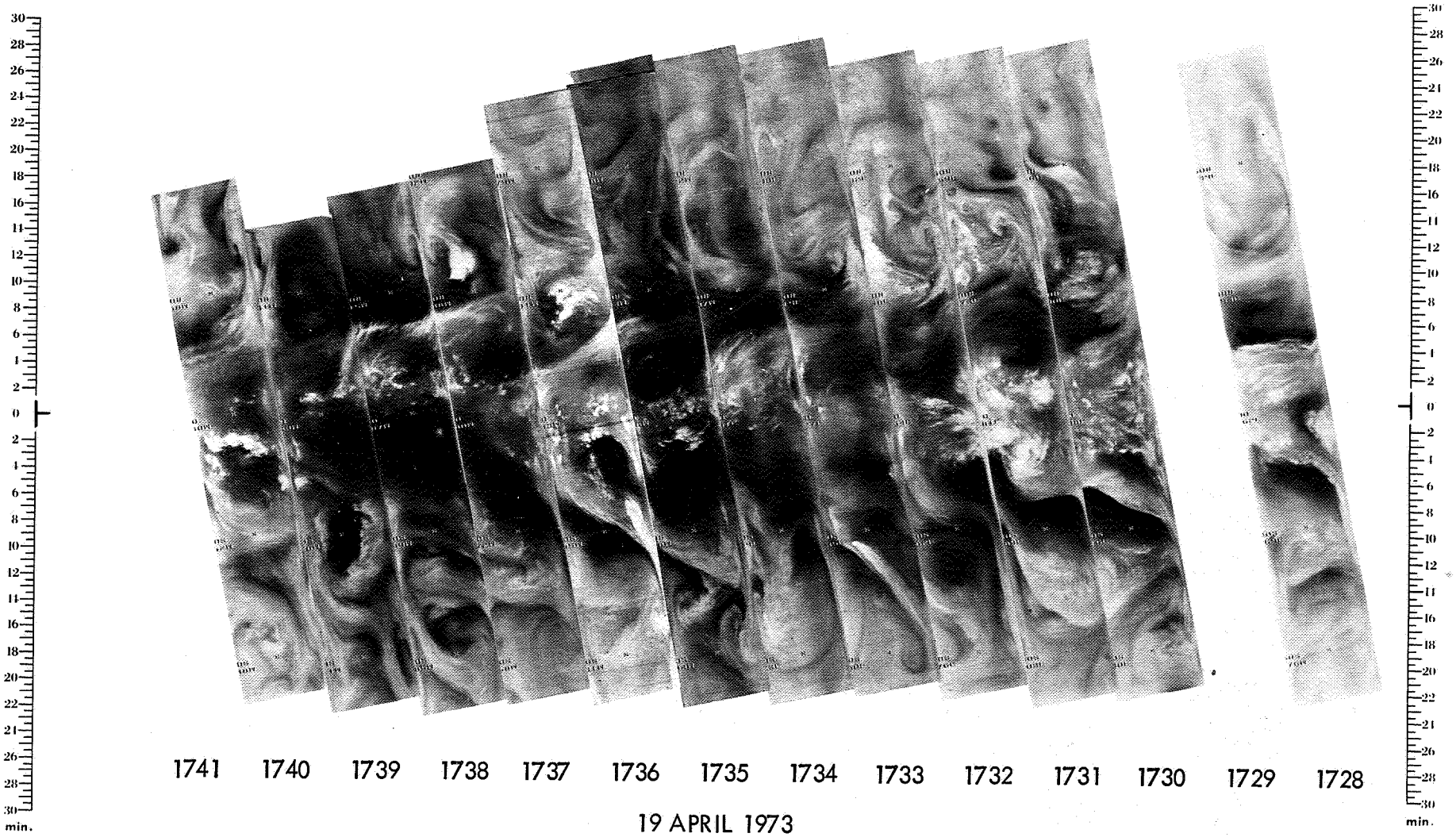
11.5 μm


1727 1726 1725 1724 1723 1722 1721 1720 1719 1718 1717 1716 1715
18 APRIL 1973
6.7 μm
min.
min.



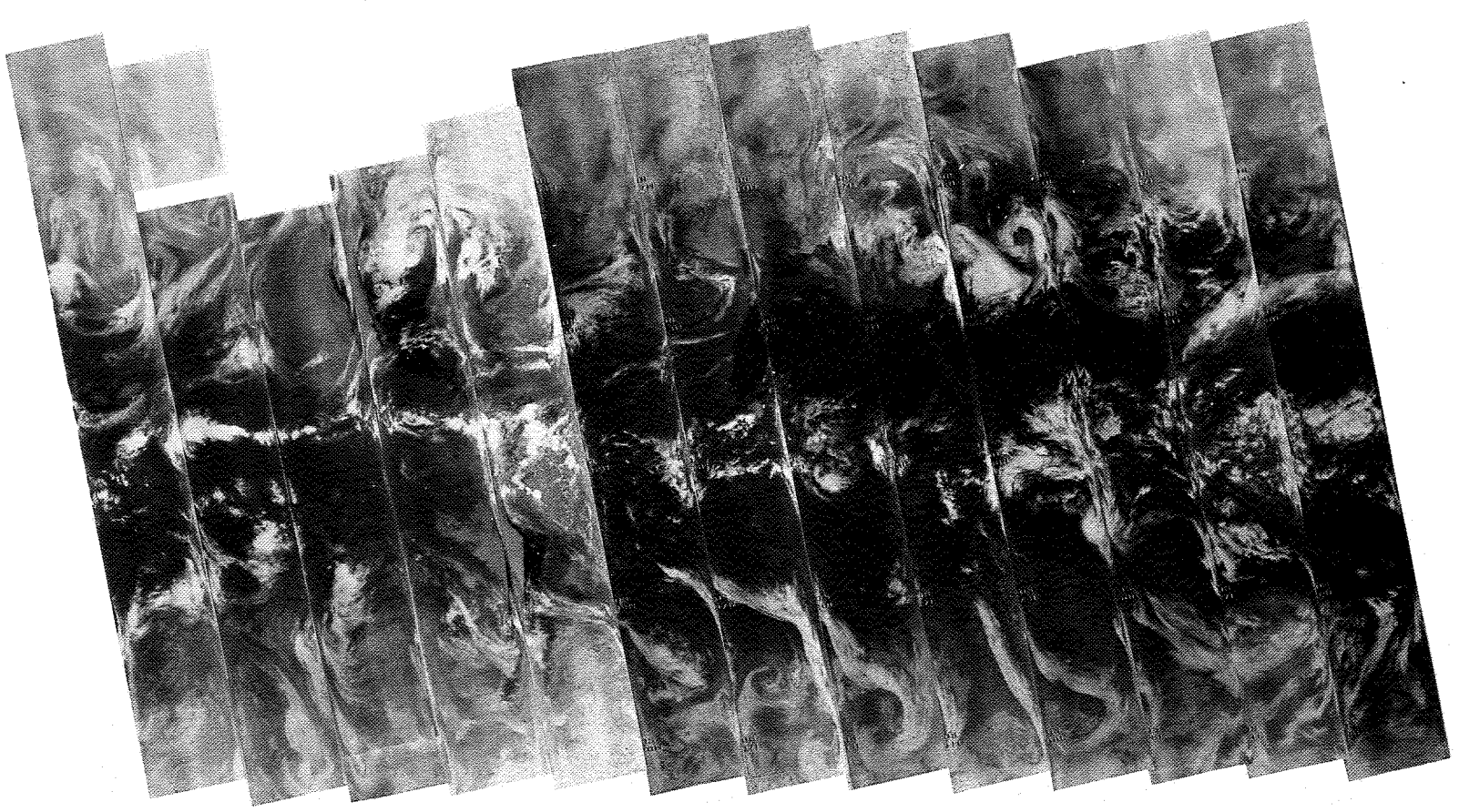
19 APRIL 1973

11.5 μm



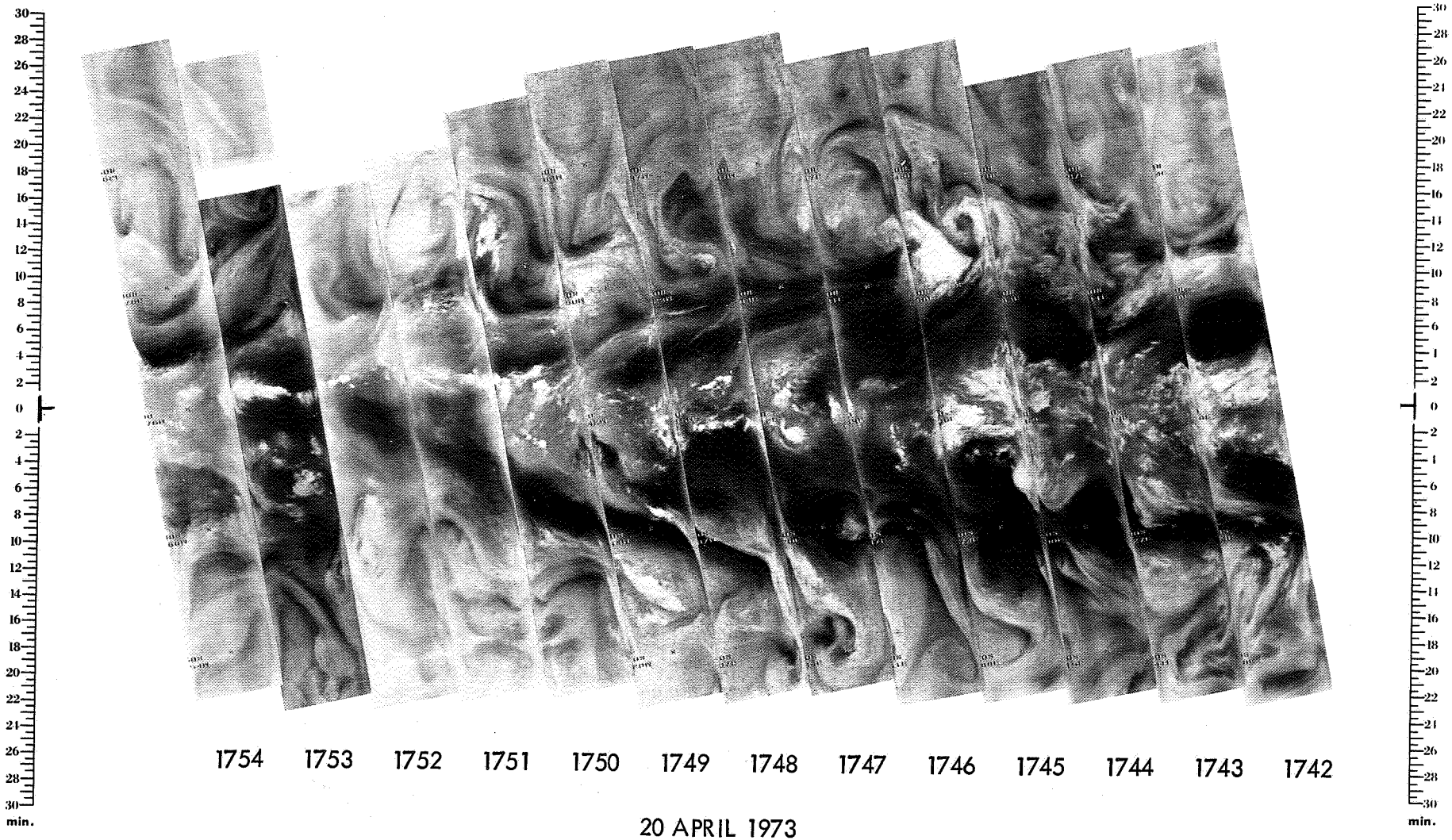
19 APRIL 1973

6.7 μm



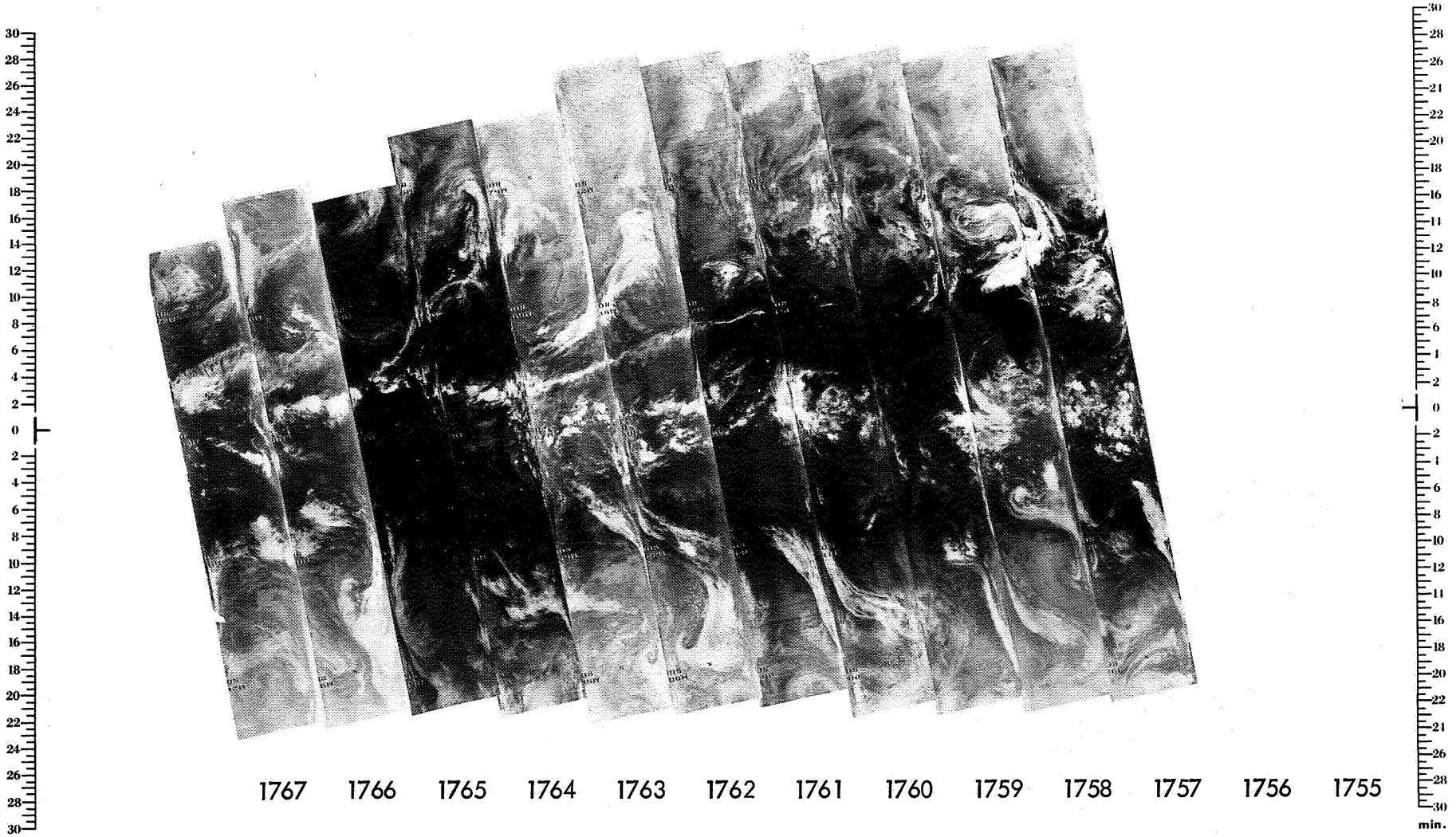
20 APRIL 1973

11.5 μm



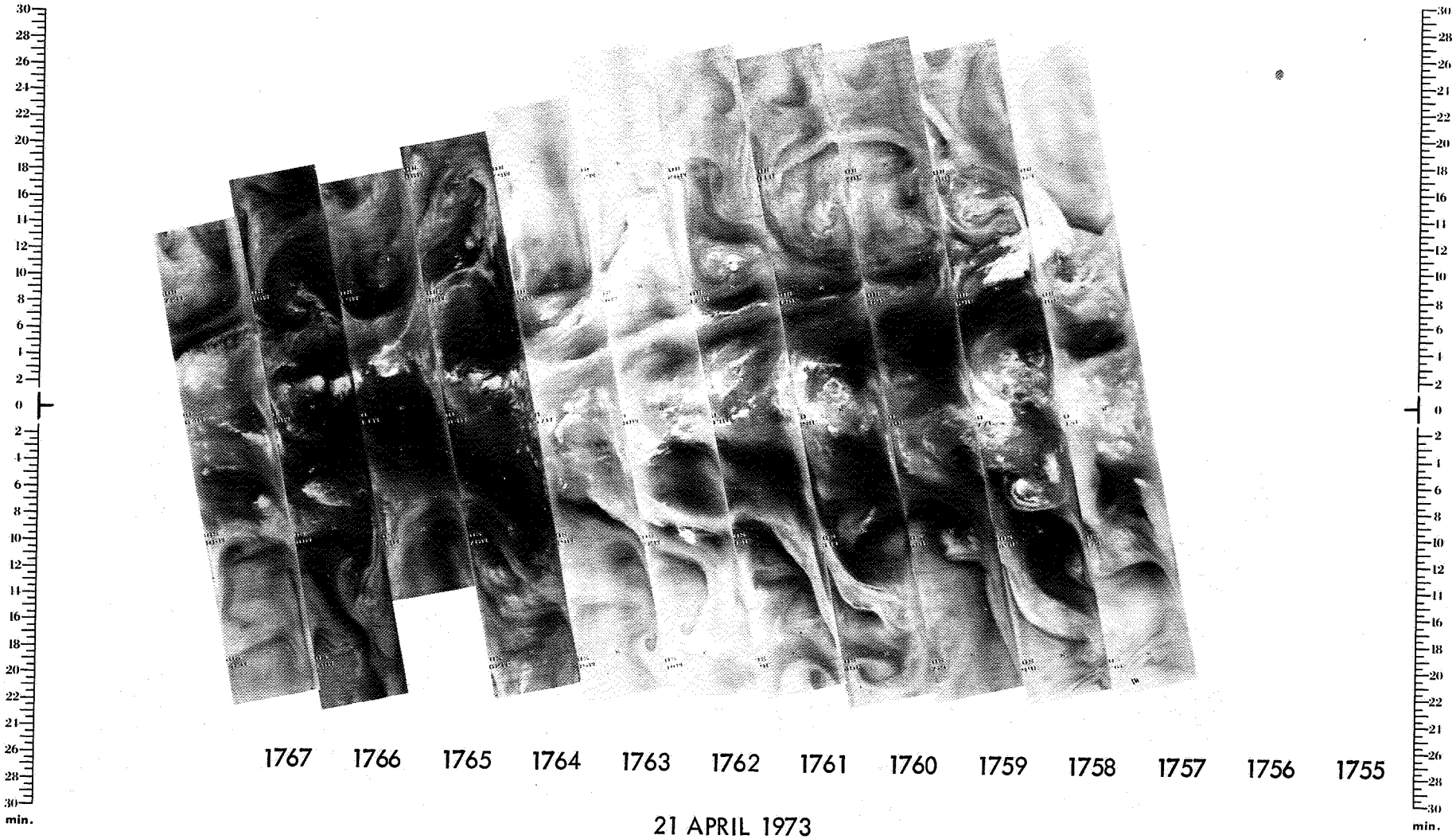
20 APRIL 1973

6.7 μm



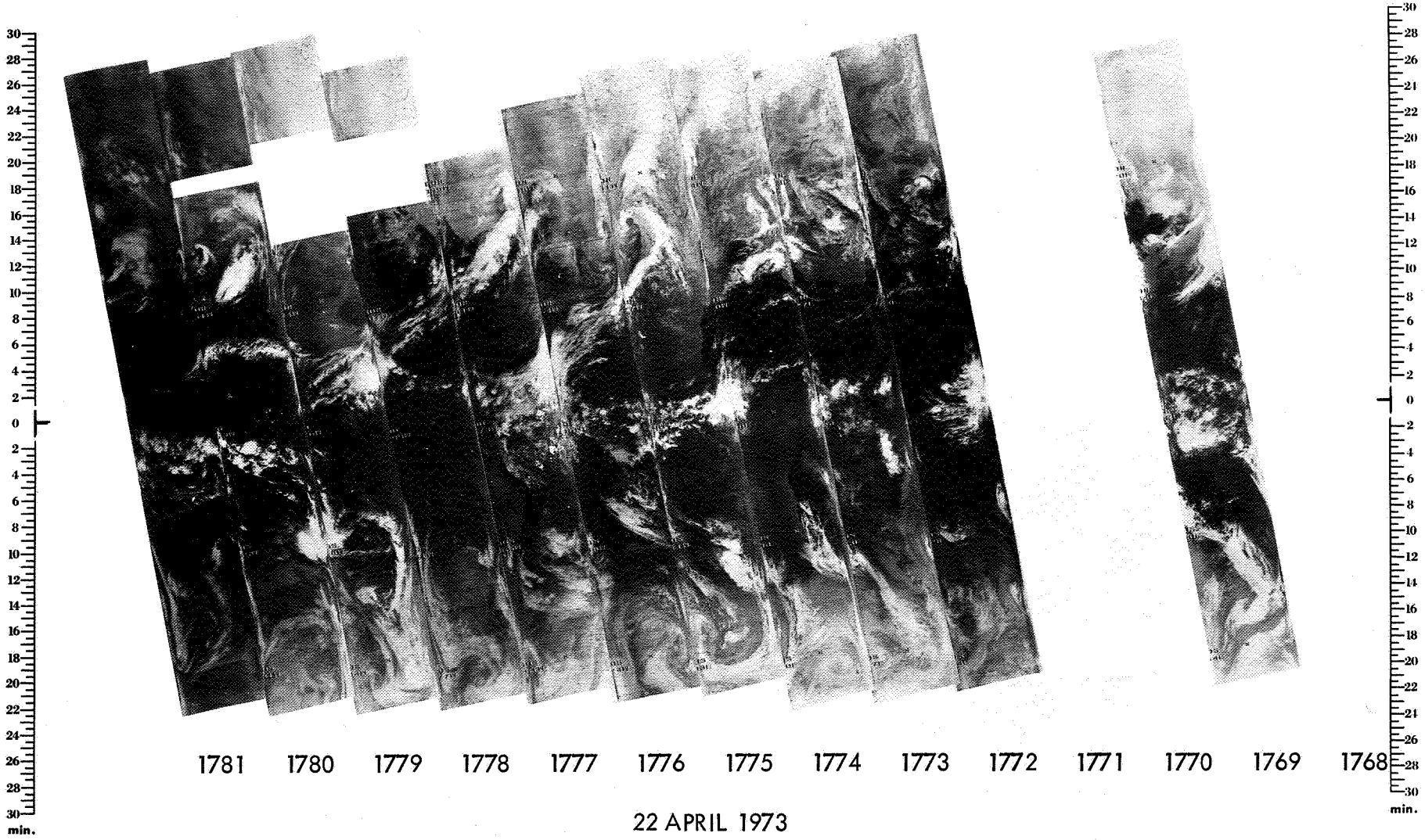
21 APRIL 1973

11.5 μm



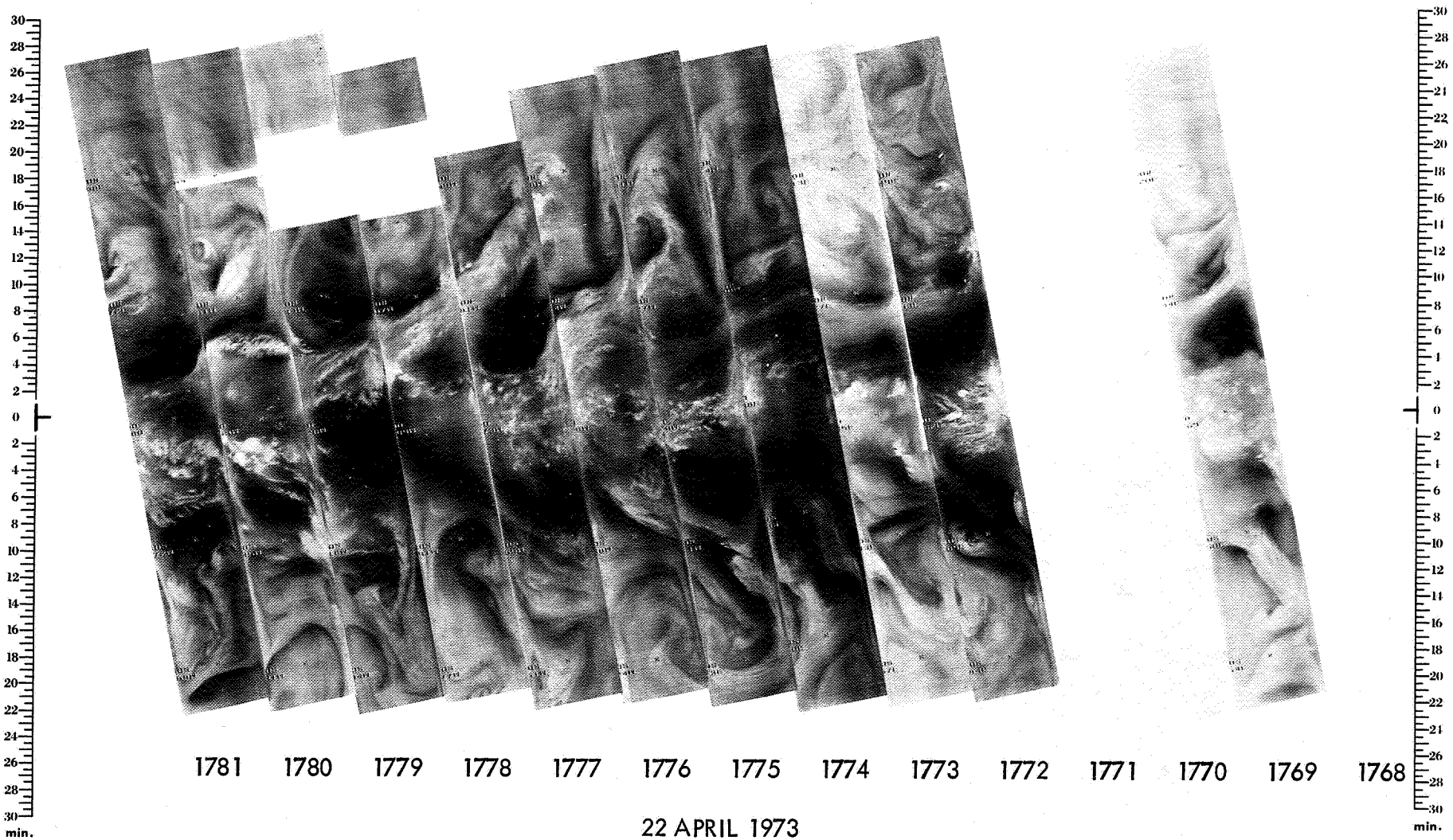
21 APRIL 1973

6.7 μm



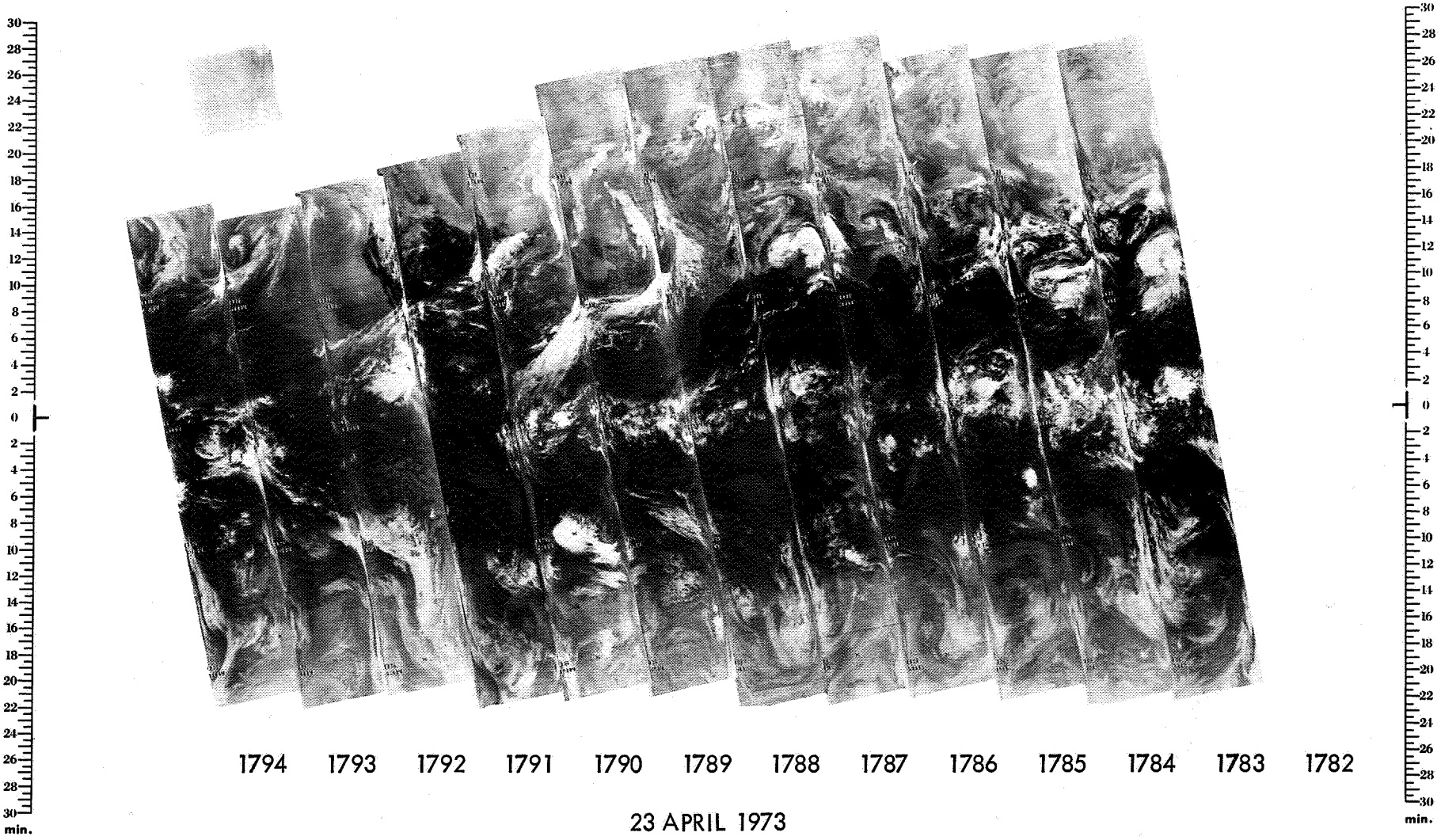
22 APRIL 1973

11.5 μm



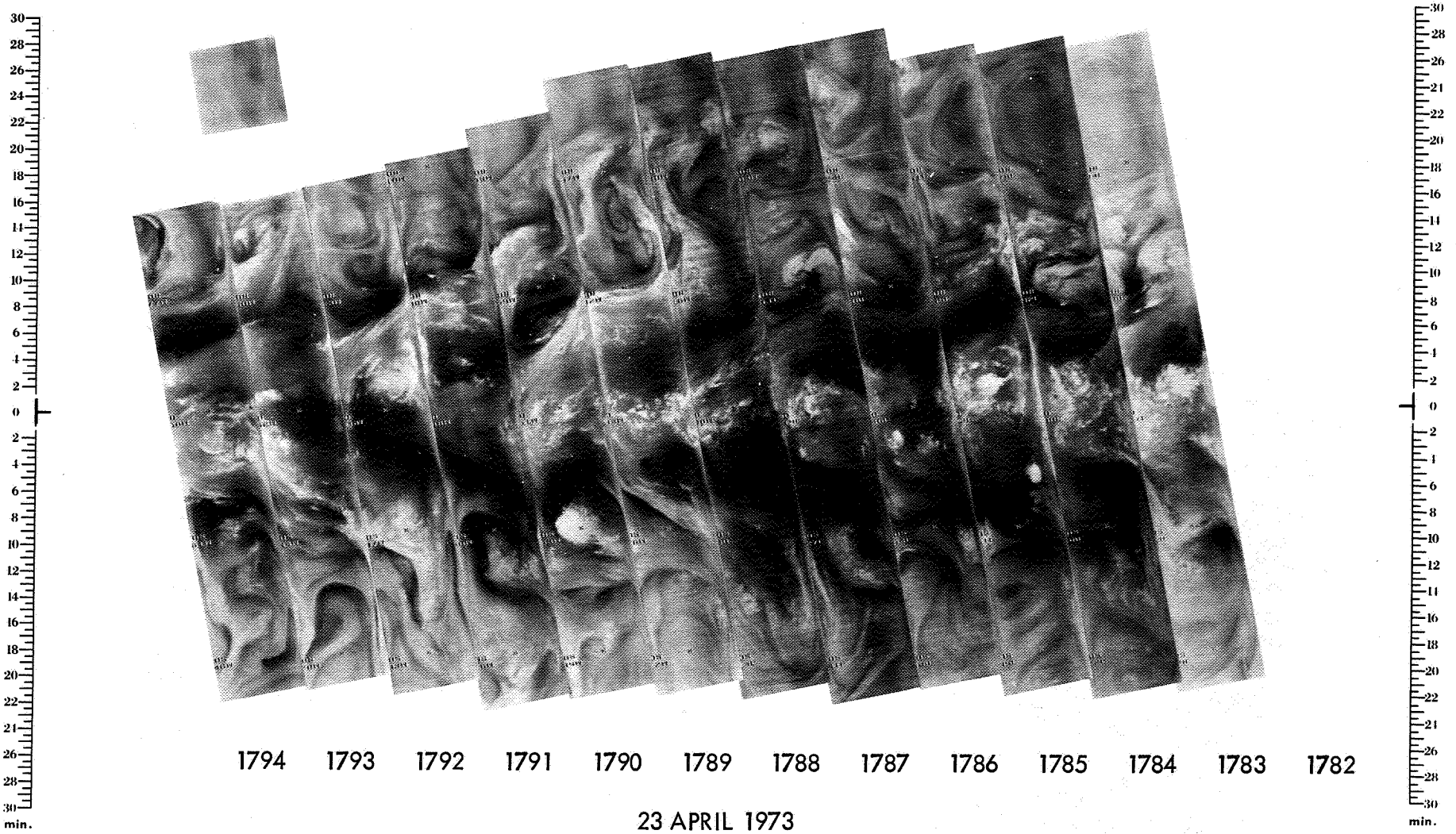
22 APRIL 1973

6.7 μm



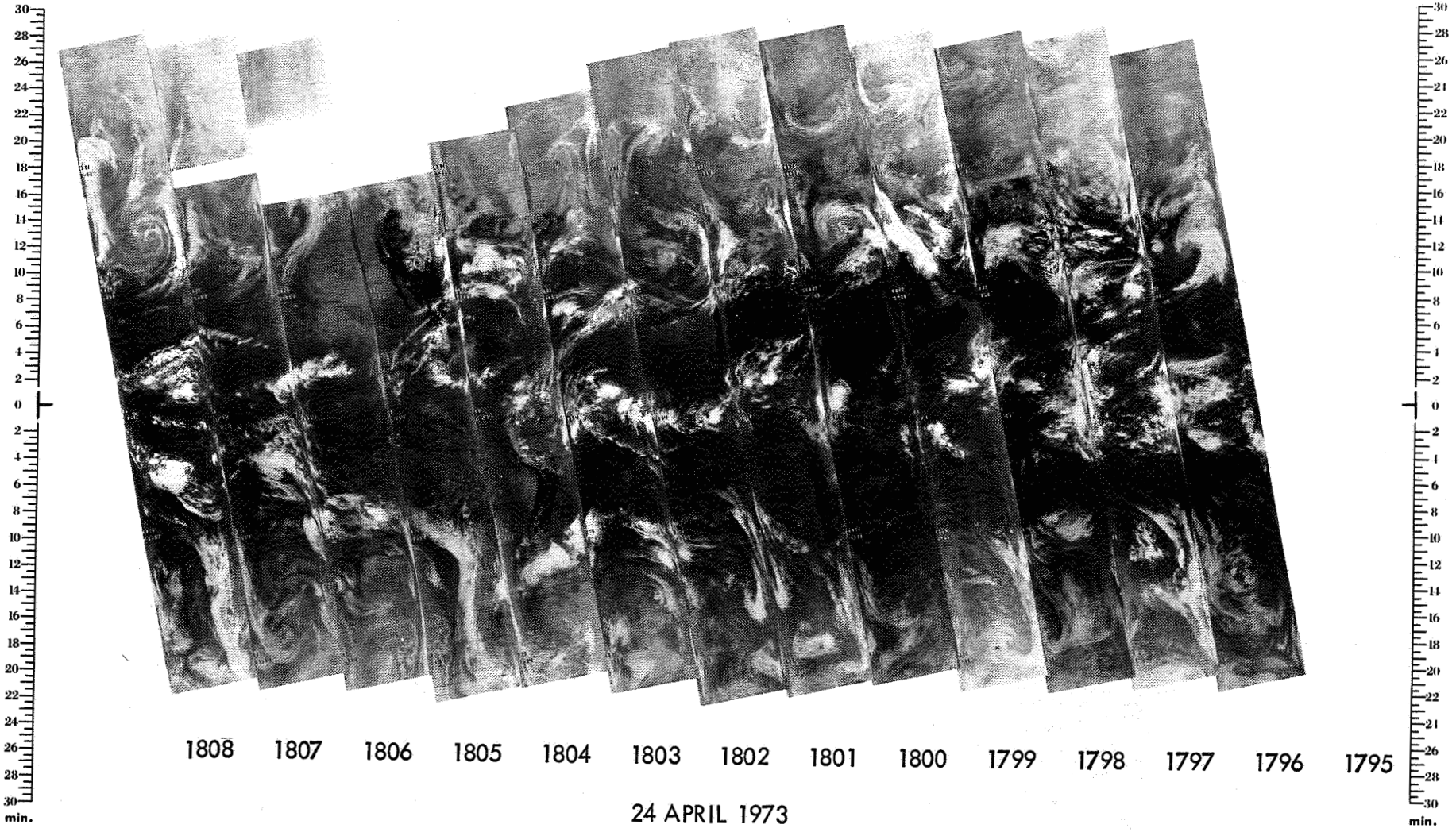
23 APRIL 1973

11.5 μm



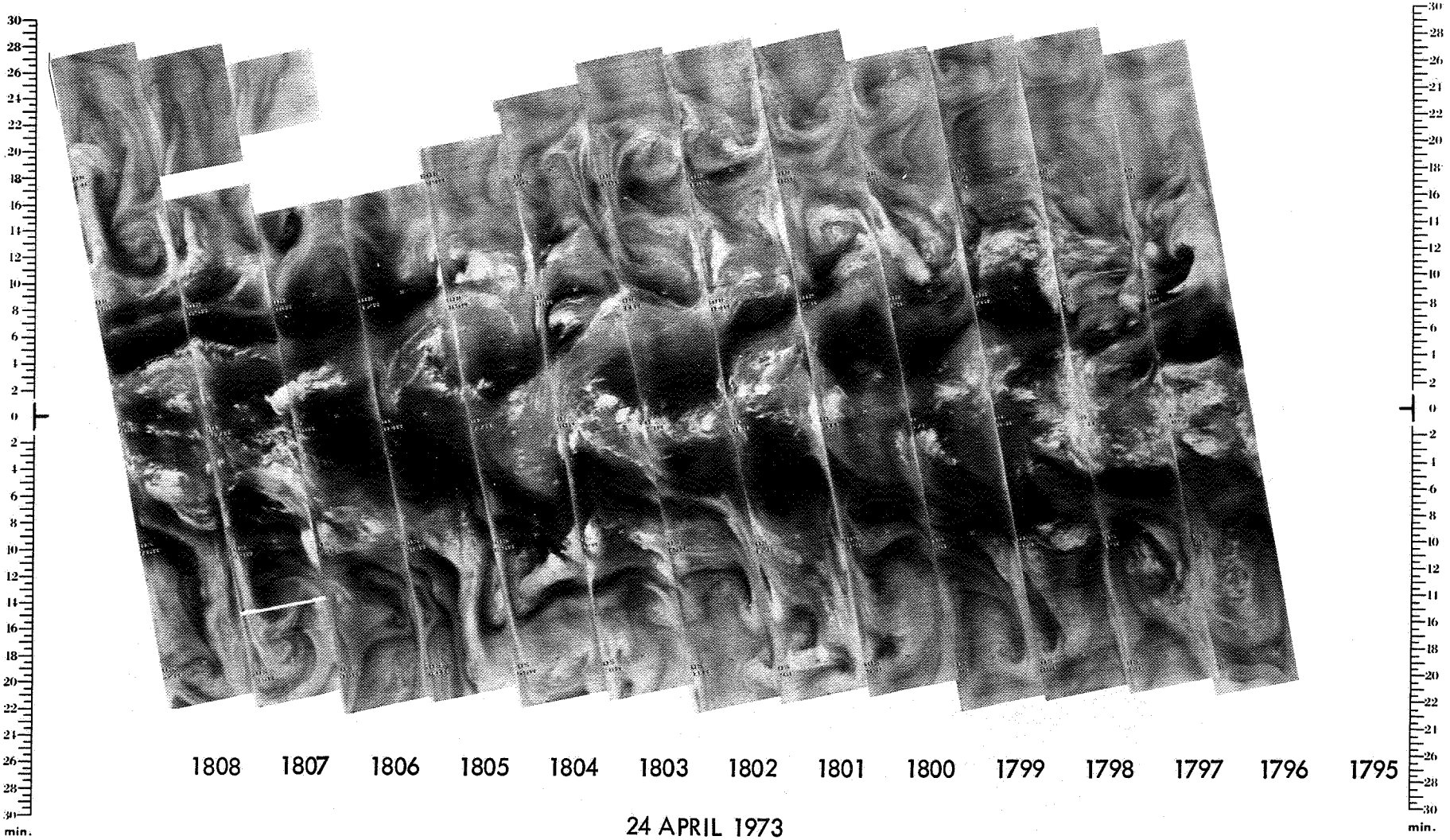
23 APRIL 1973

6.7 μm



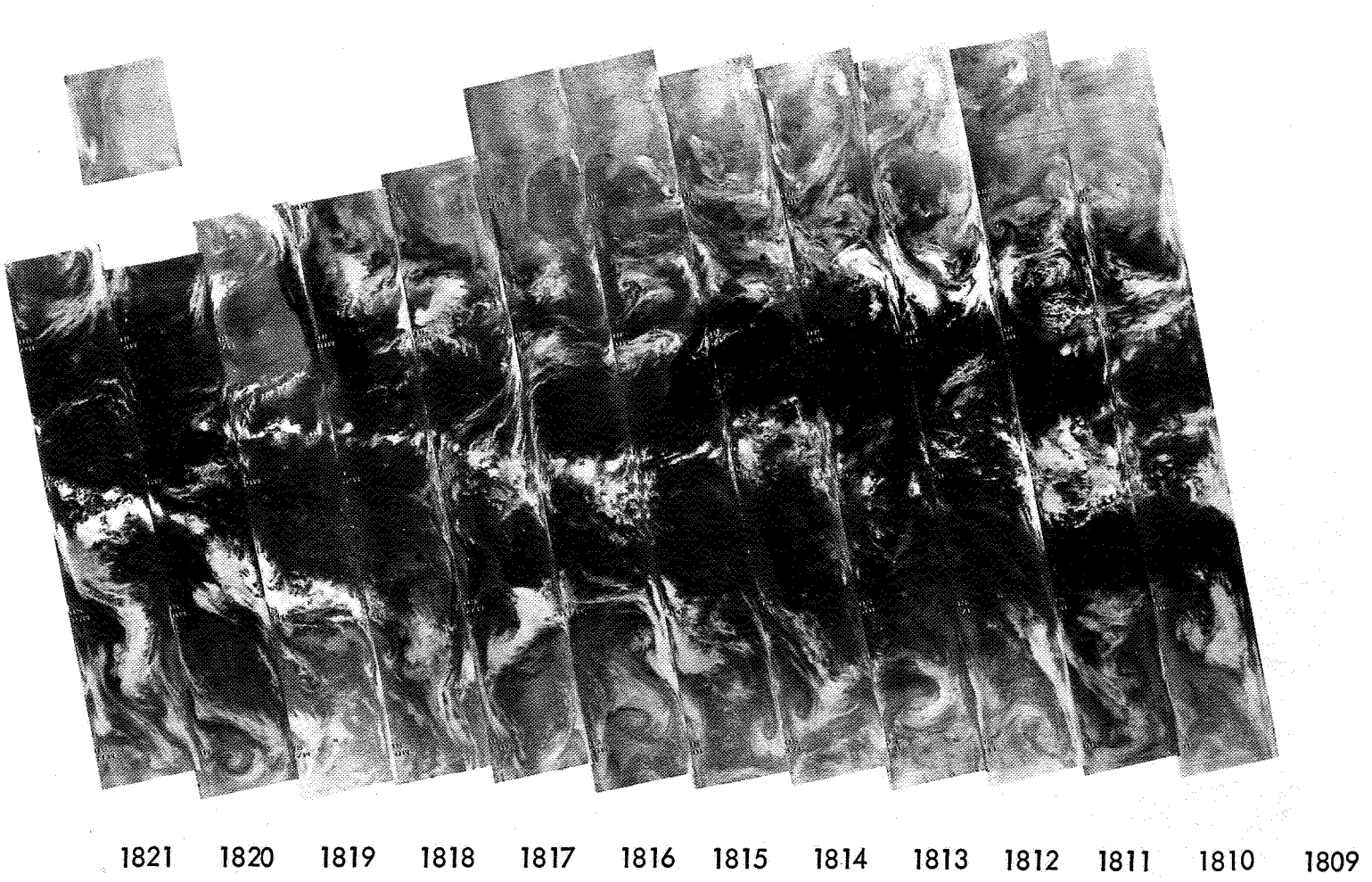
24 APRIL 1973

11.5 μm



24 APRIL 1973

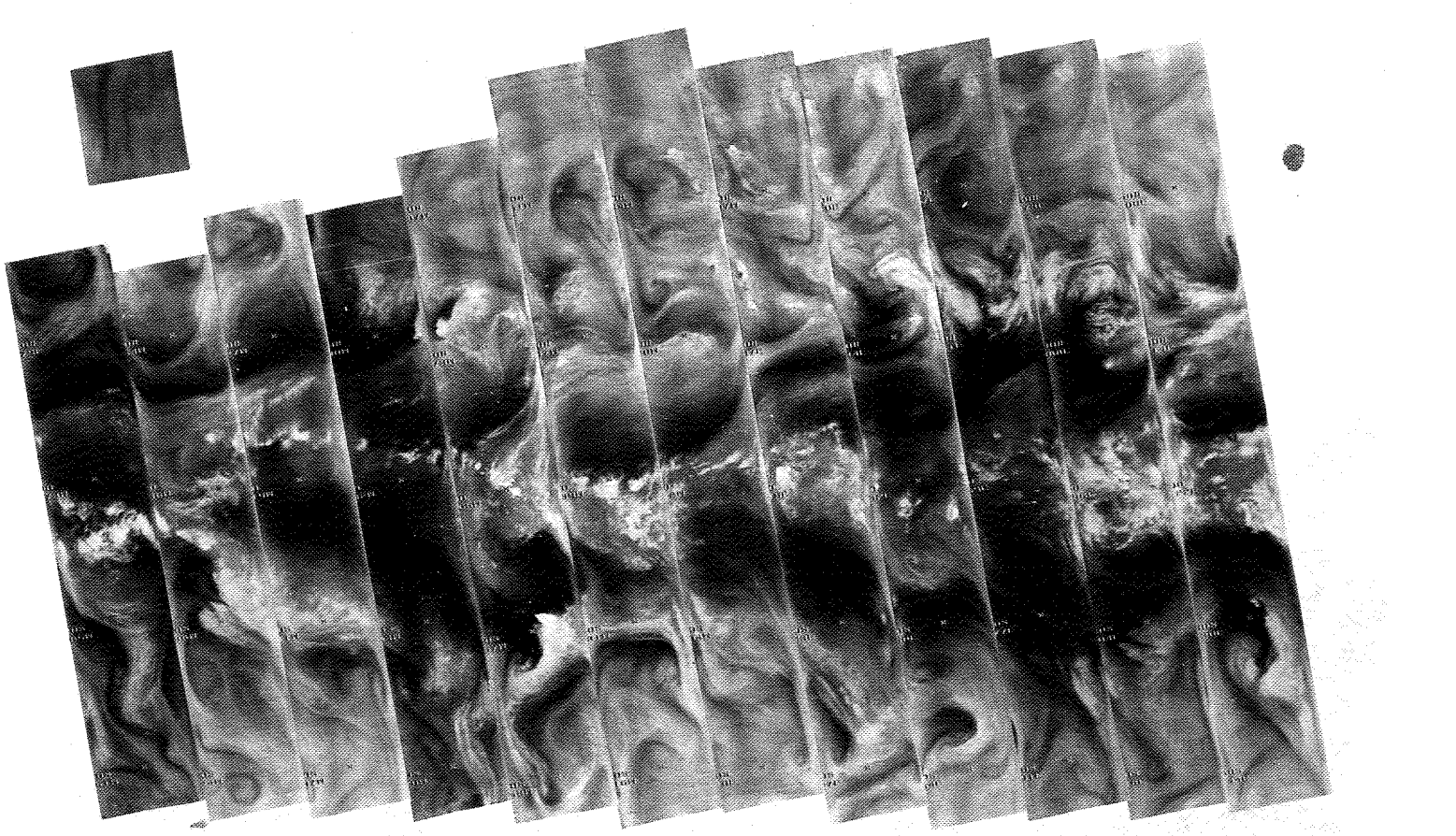
6.7 μm



1821 1820 1819 1818 1817 1816 1815 1814 1813 1812 1811 1810 1809

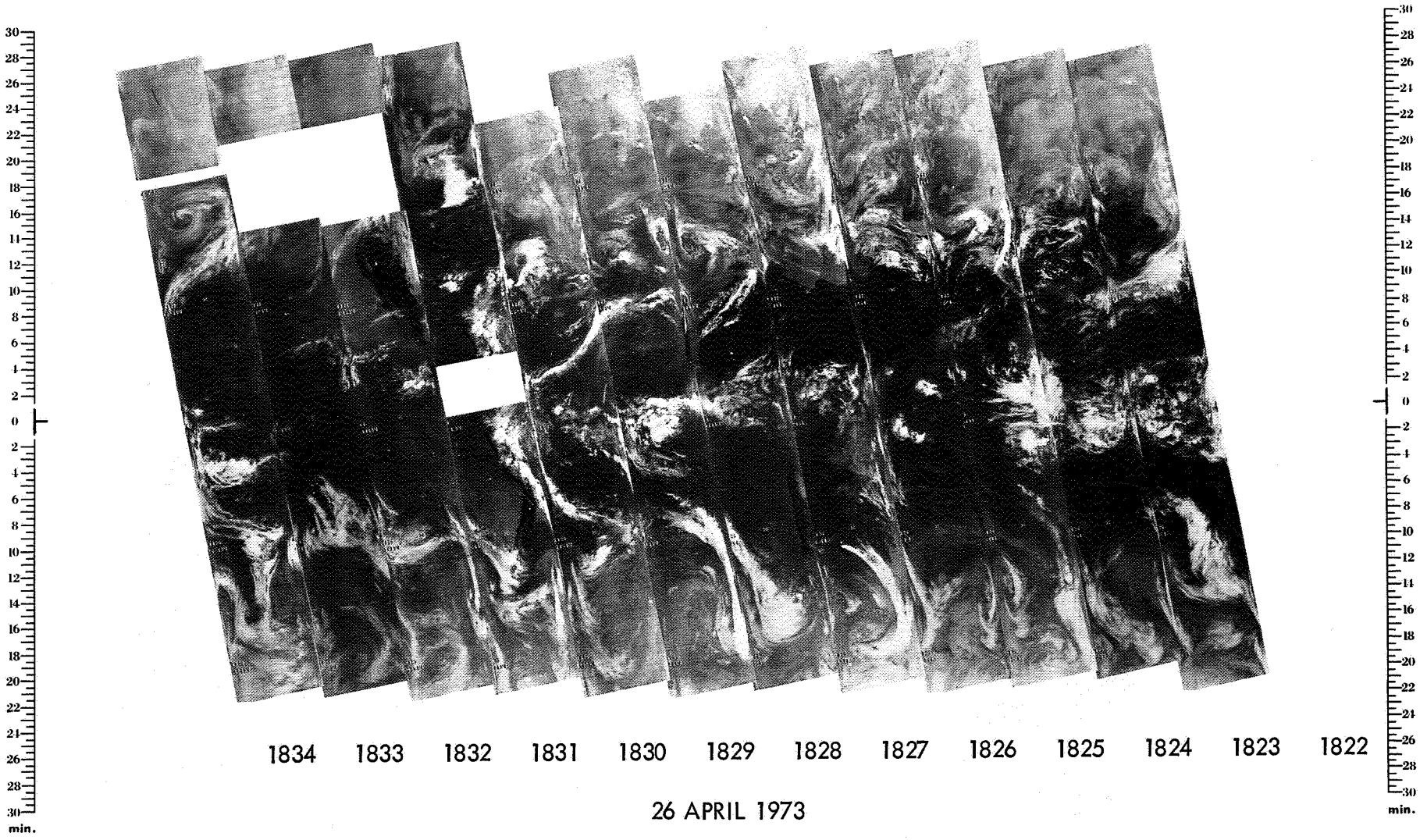
25 APRIL 1973

11.5 μm



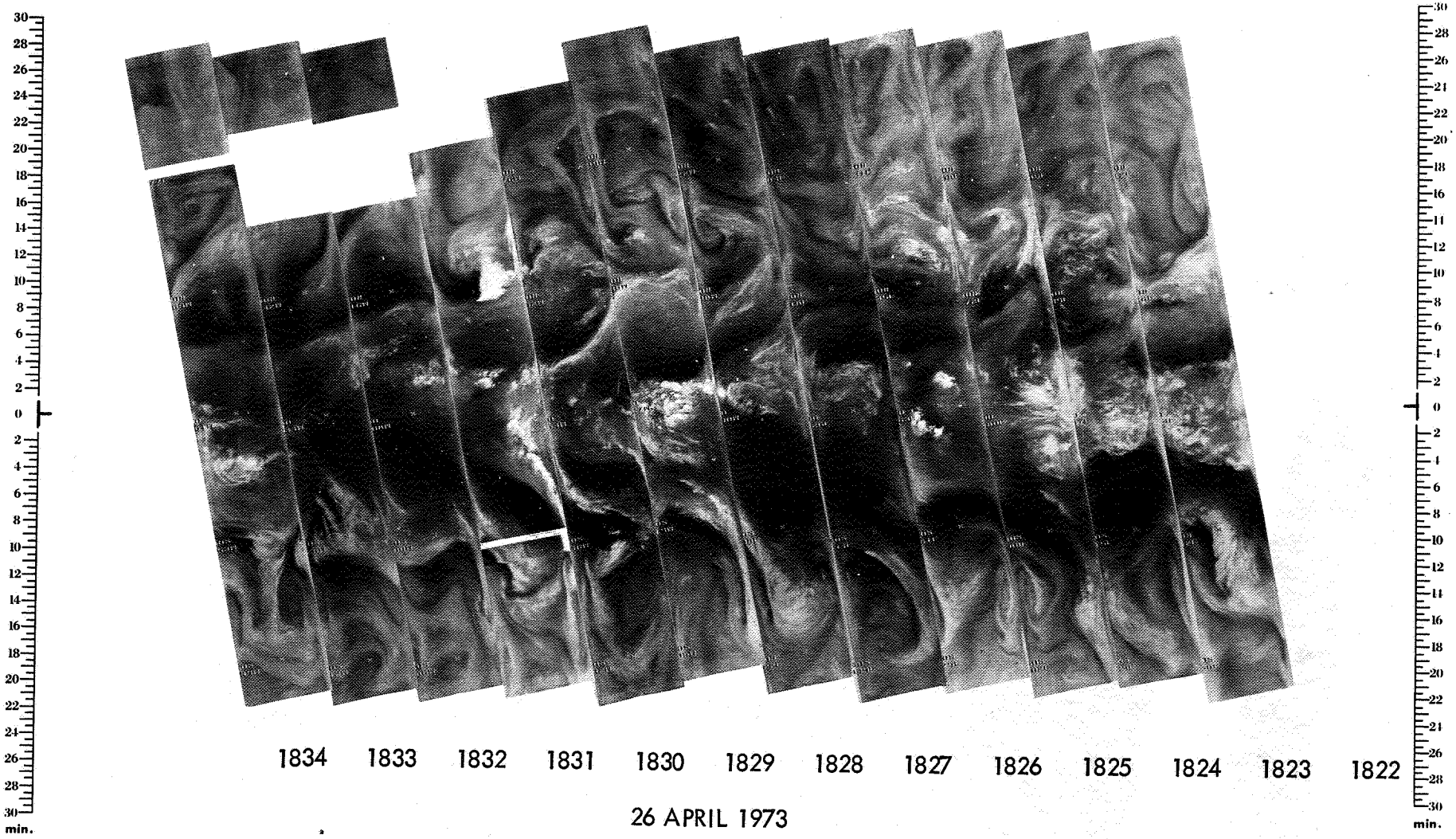
25 APRIL 1973

6.7 μm



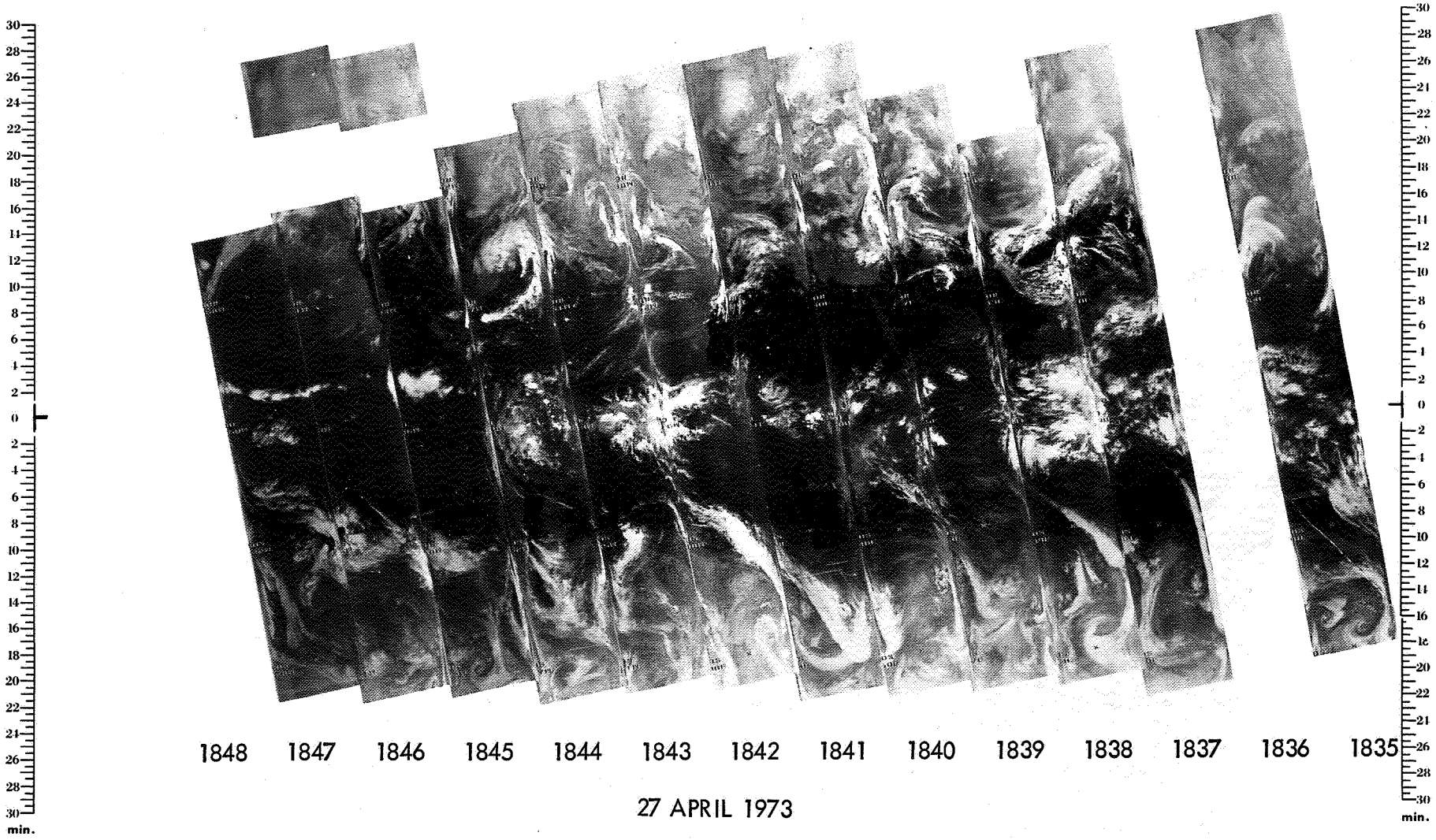
26 APRIL 1973

11.5 μm



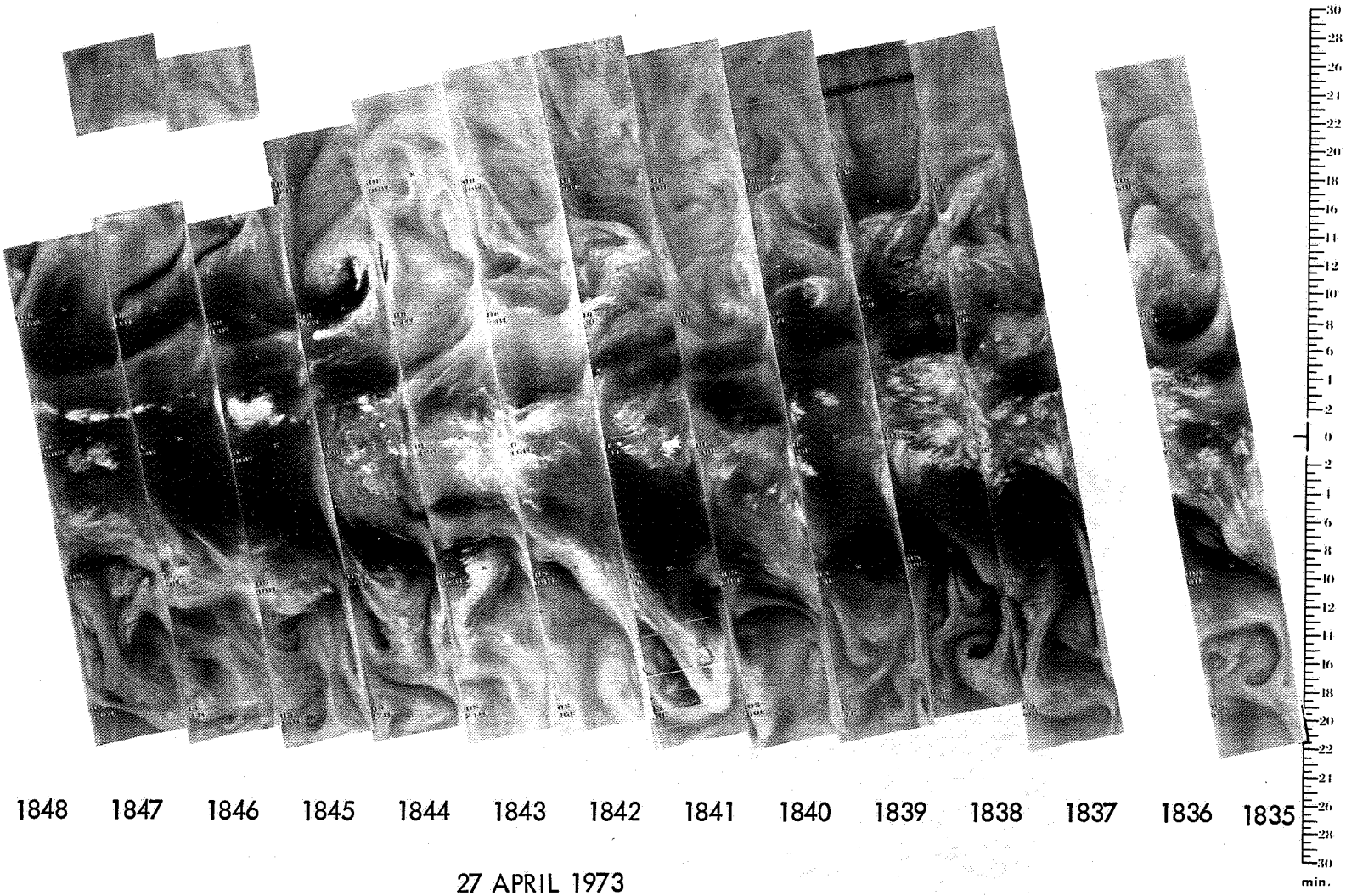
26 APRIL 1973

6.7 μm



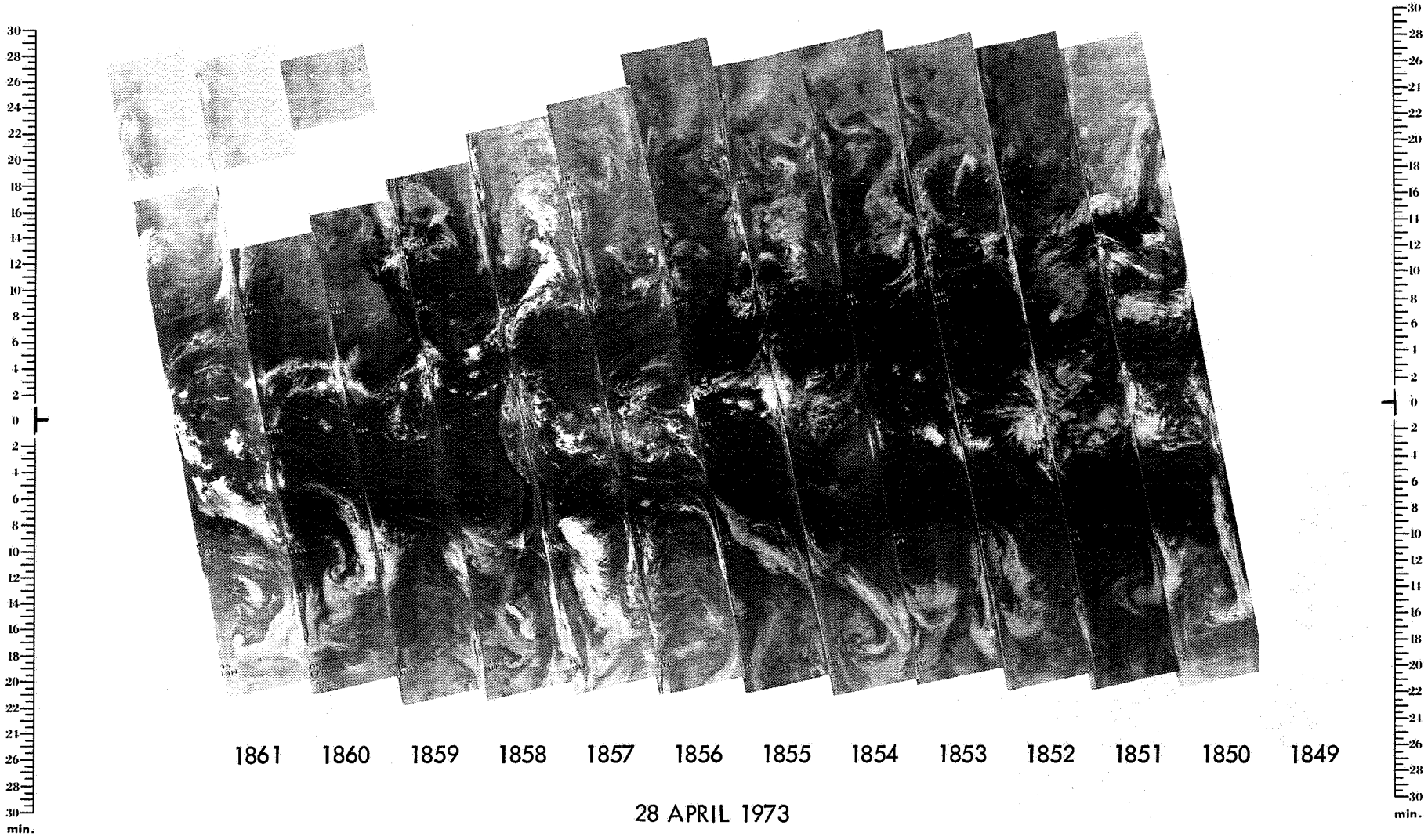
27 APRIL 1973

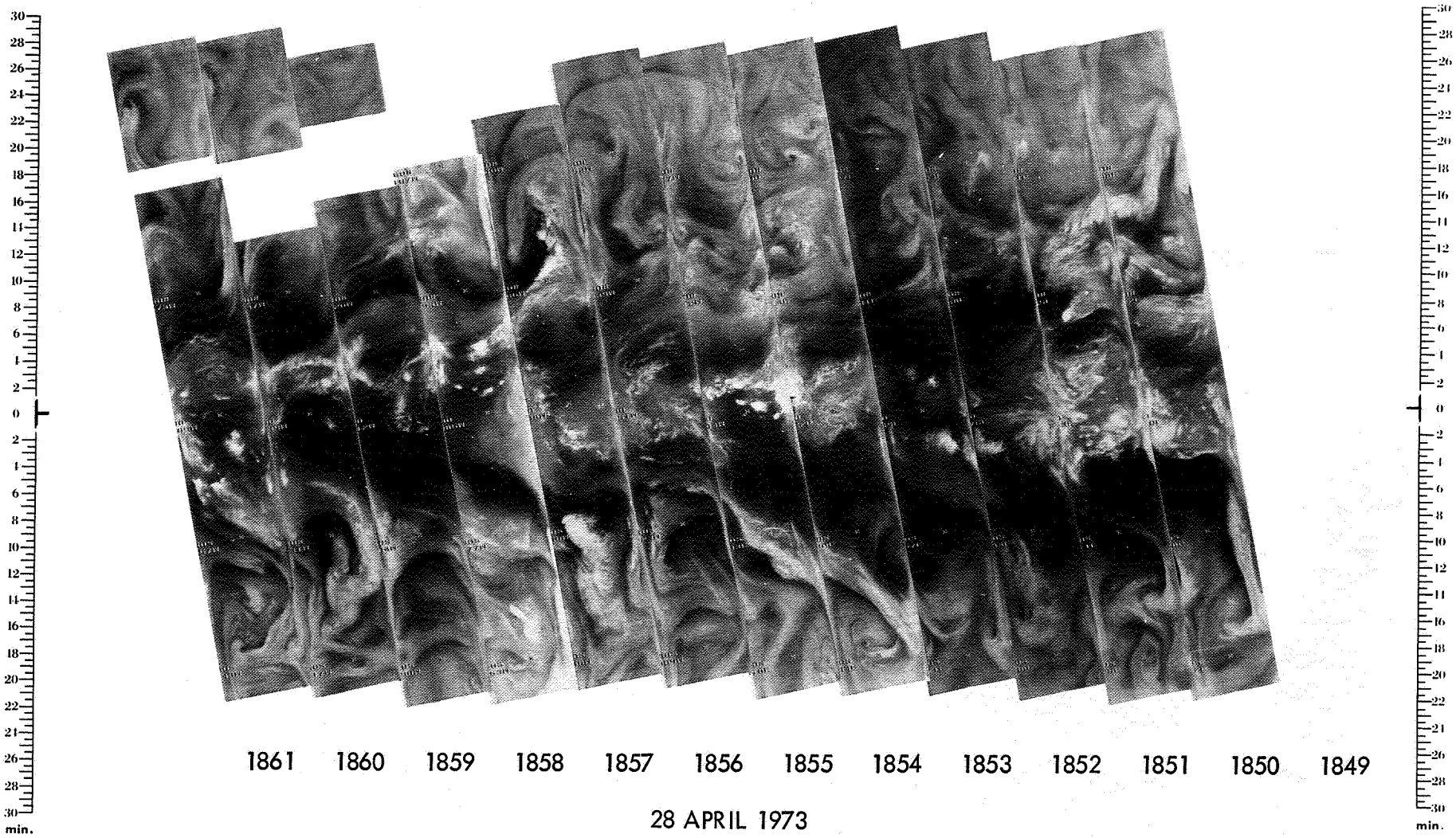
11.5 μm

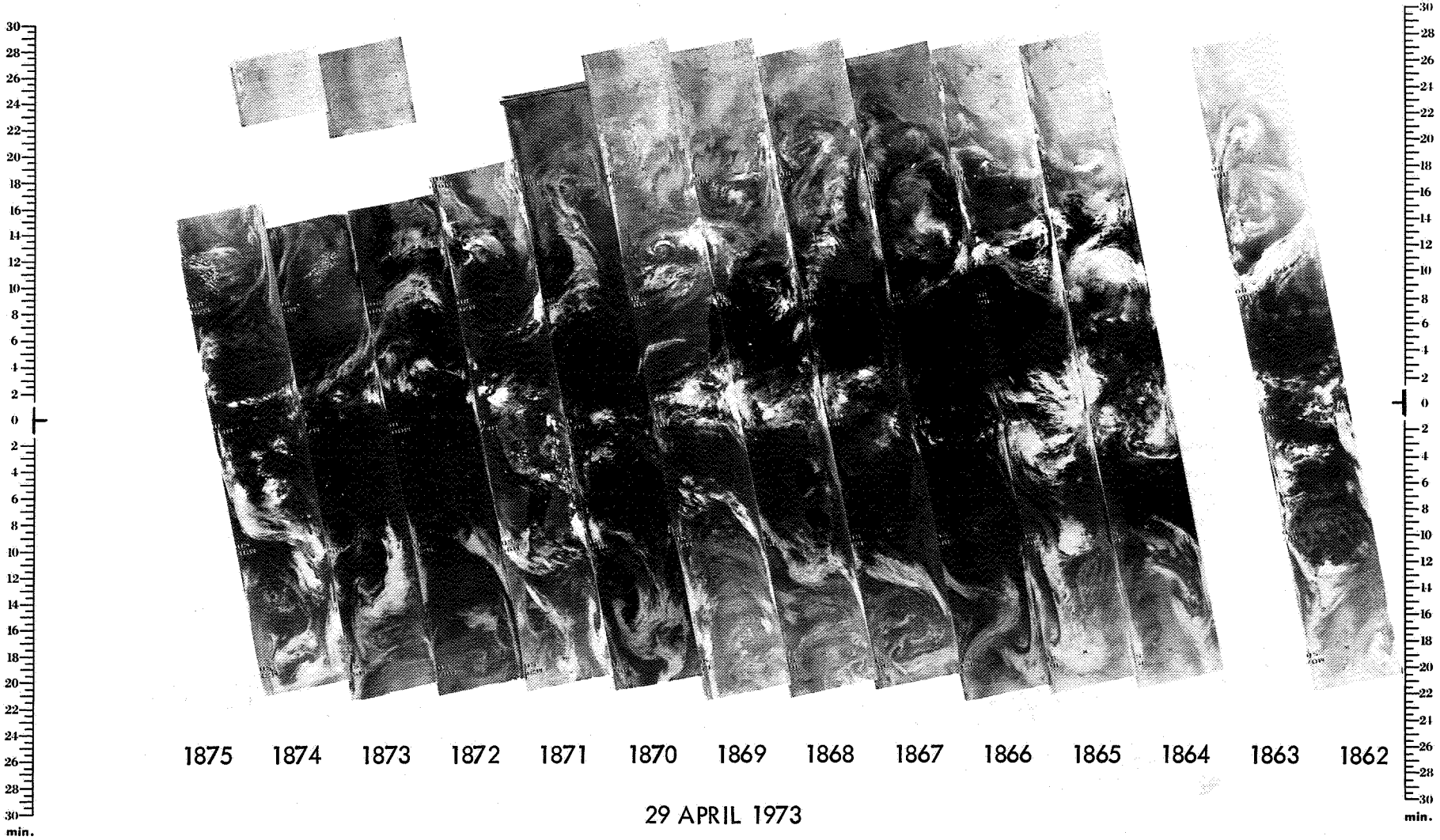


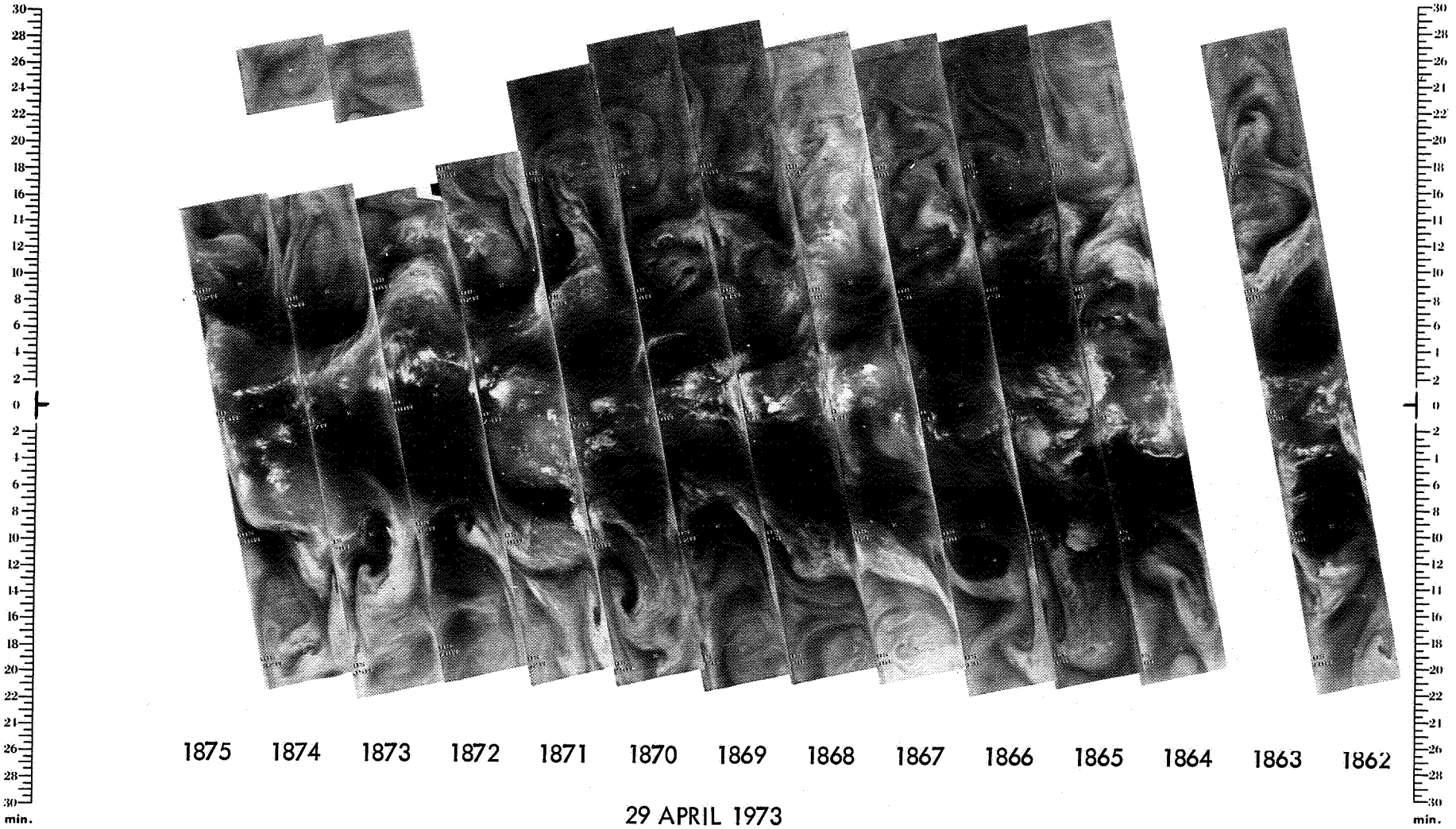
27 APRIL 1973

6.7 μm


1861 1860 1859 1858 1857 1856 1855 1854 1853 1852 1851 1850 1849
28 APRIL 1973
11.5 μm
min.
min.

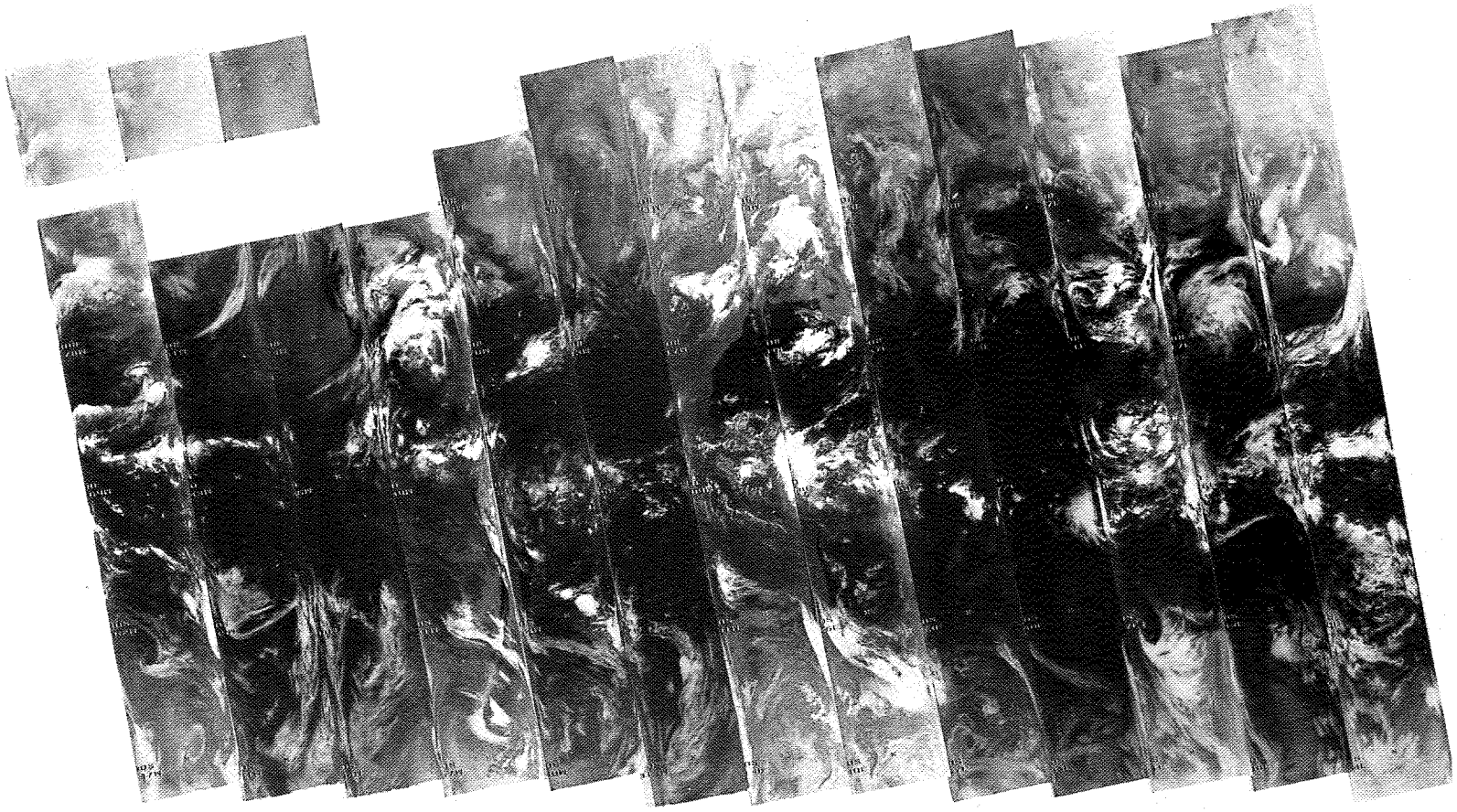

1861 1860 1859 1858 1857 1856 1855 1854 1853 1852 1851 1850 1849
28 APRIL 1973
6.7 μm
min.
min.

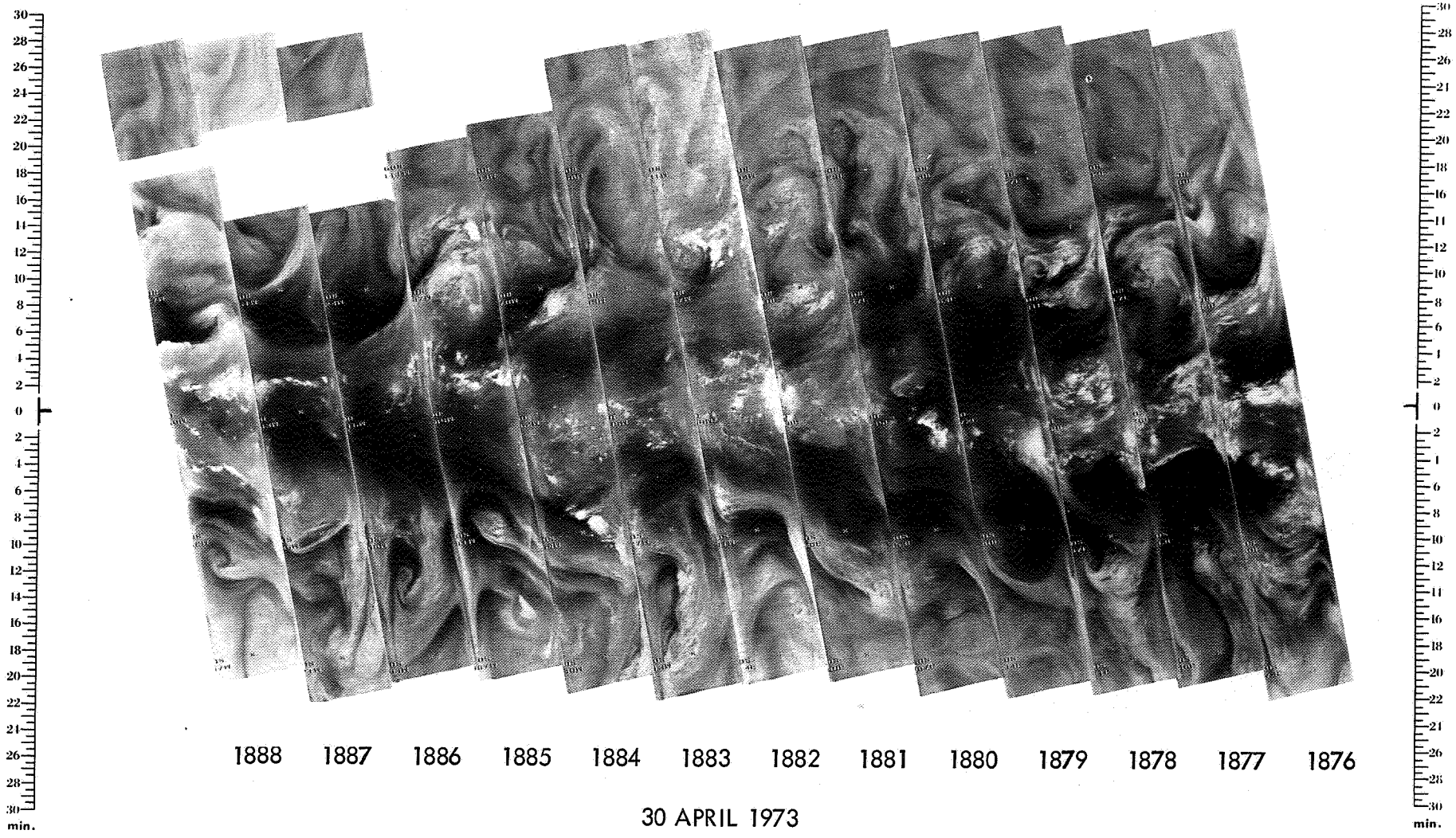

1875
1874
1873
1872
1871
1870
1869
1868
1867
1866
1865
1864
1863
1862
29 APRIL 1973
11.5 μm
min.
min.

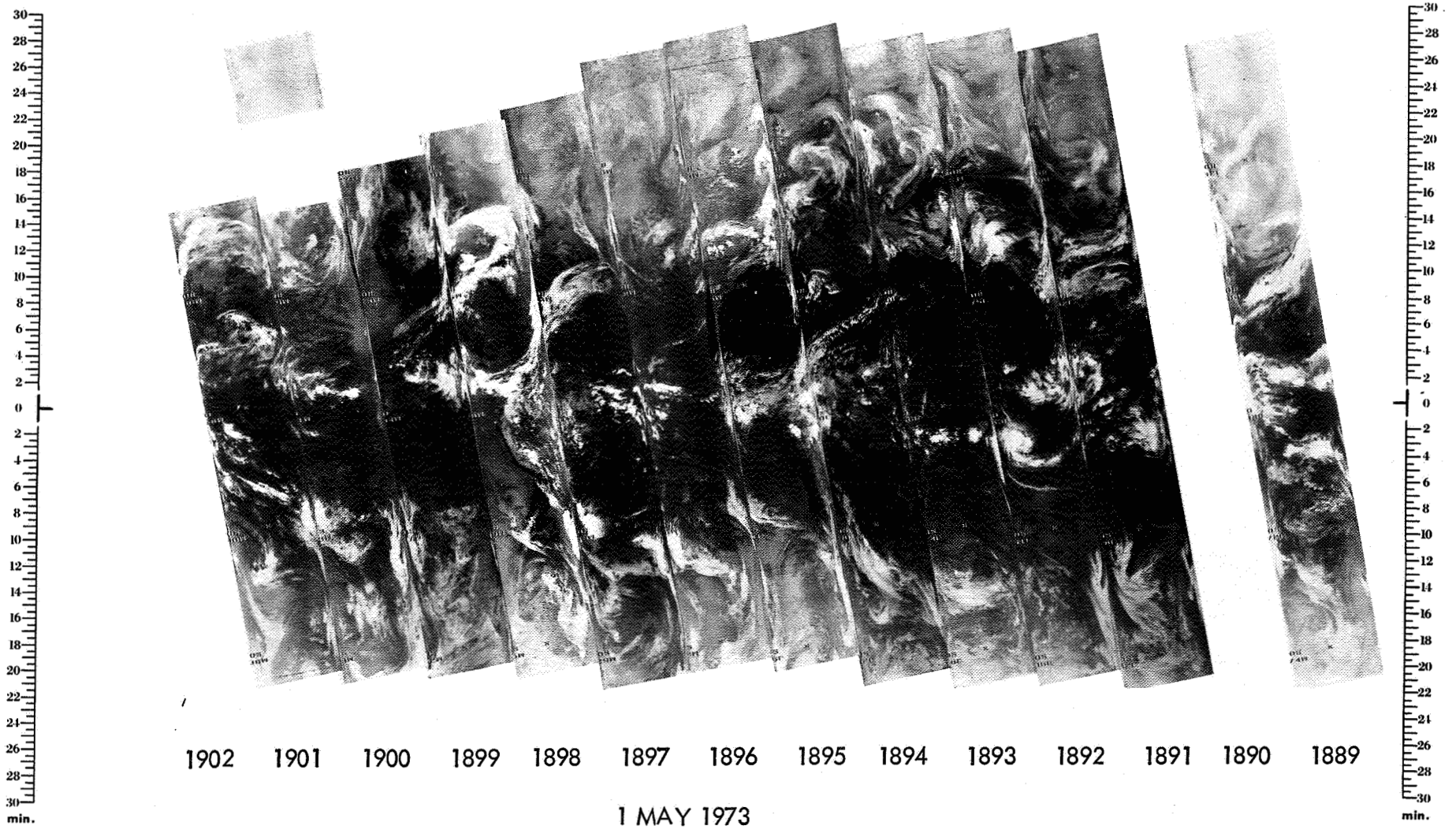


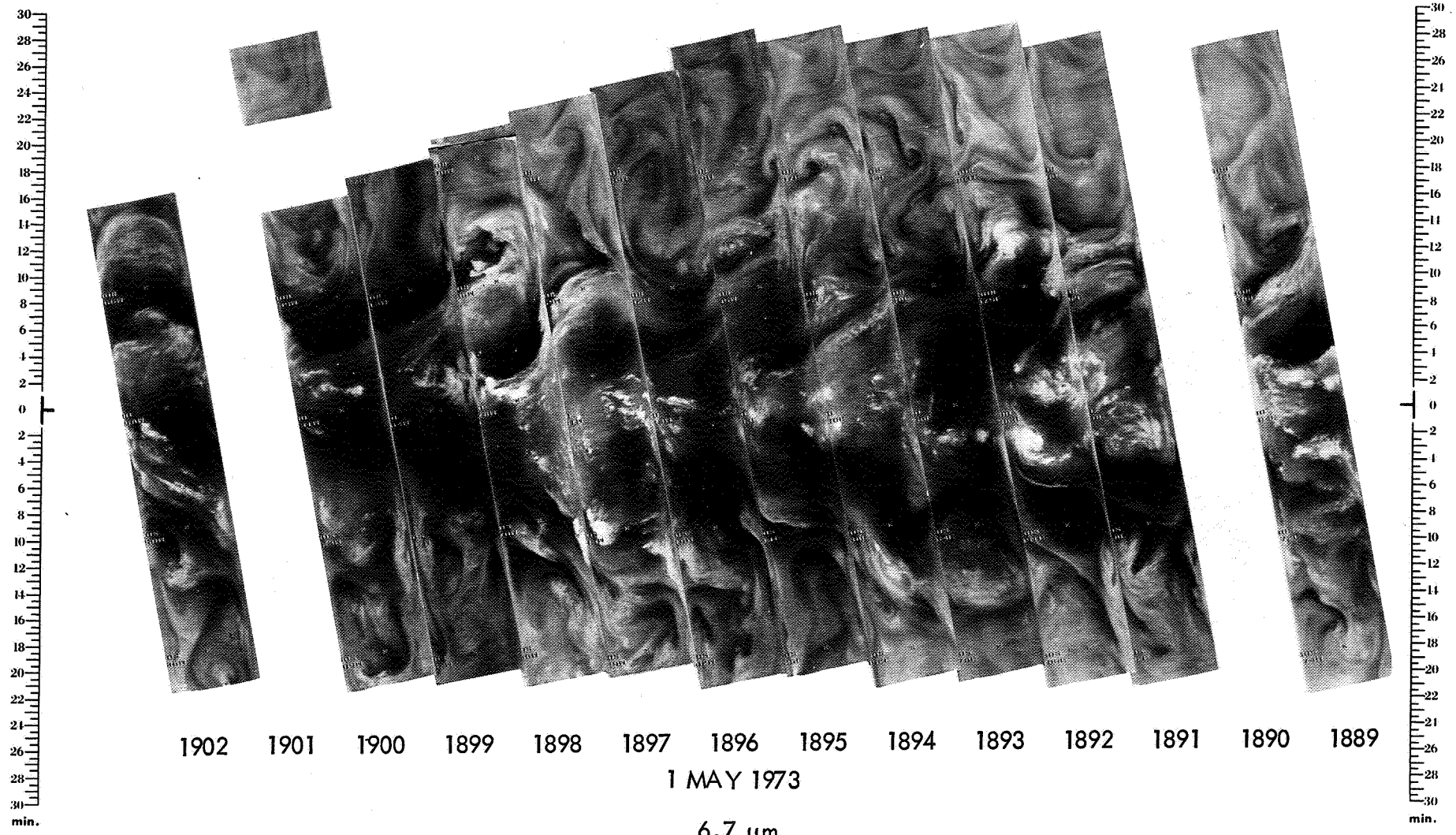
29 APRIL 1973

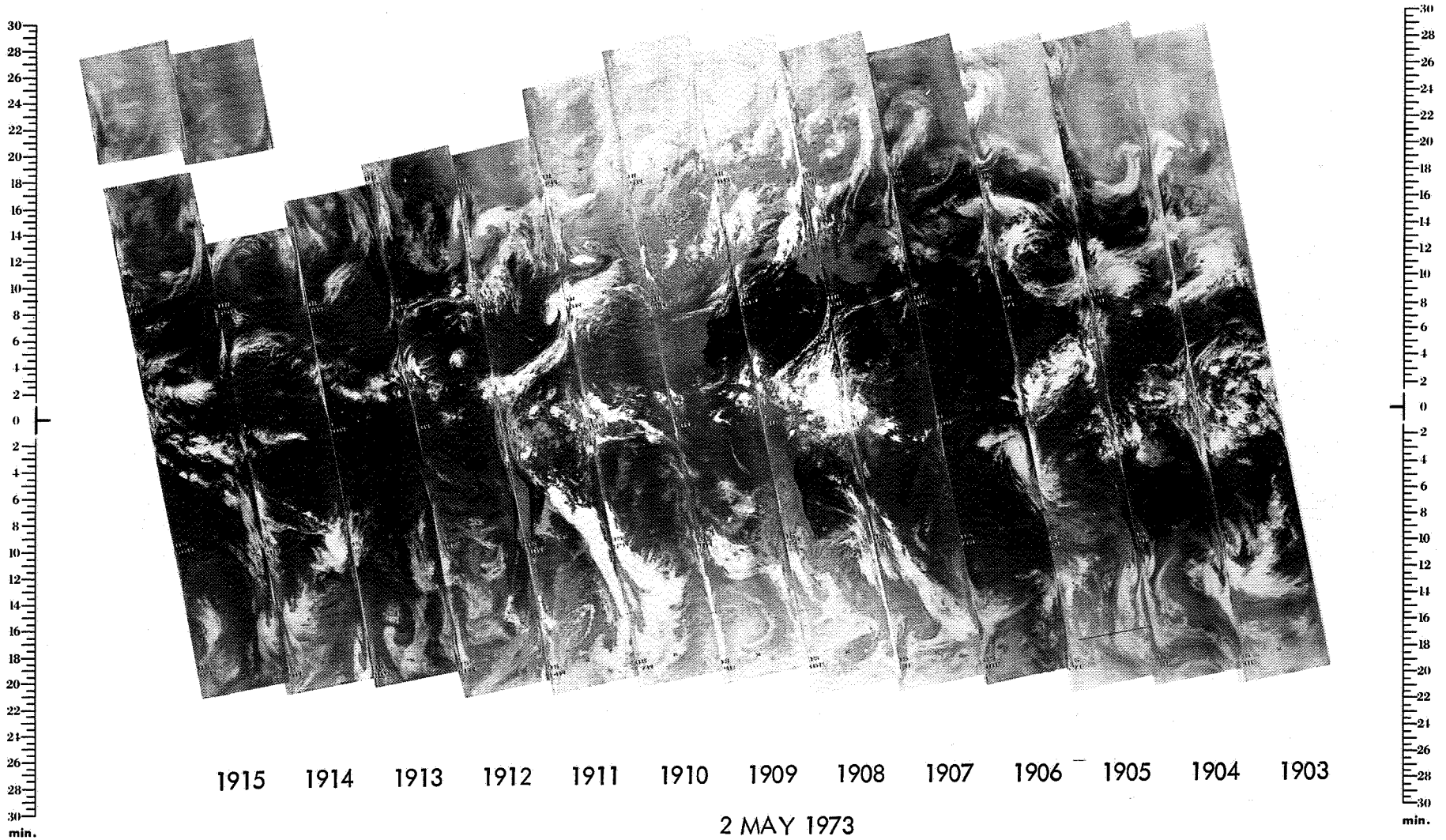
6.7 μm

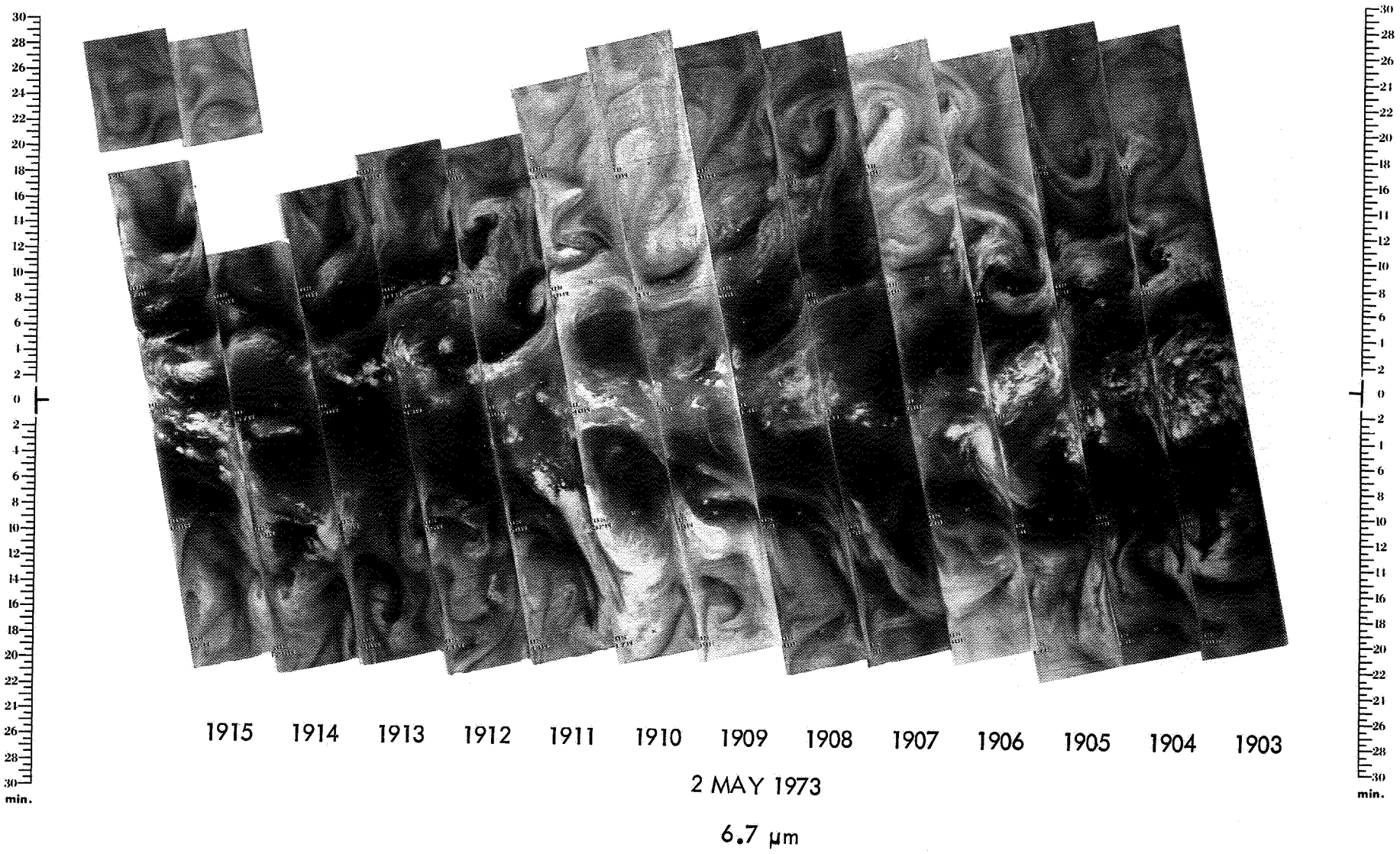

1888
1887
1886
1885
1884
1883
1882
1881
1880
1879
1878
1877
1876
30 APRIL 1973
11.5 μm
min.
min.

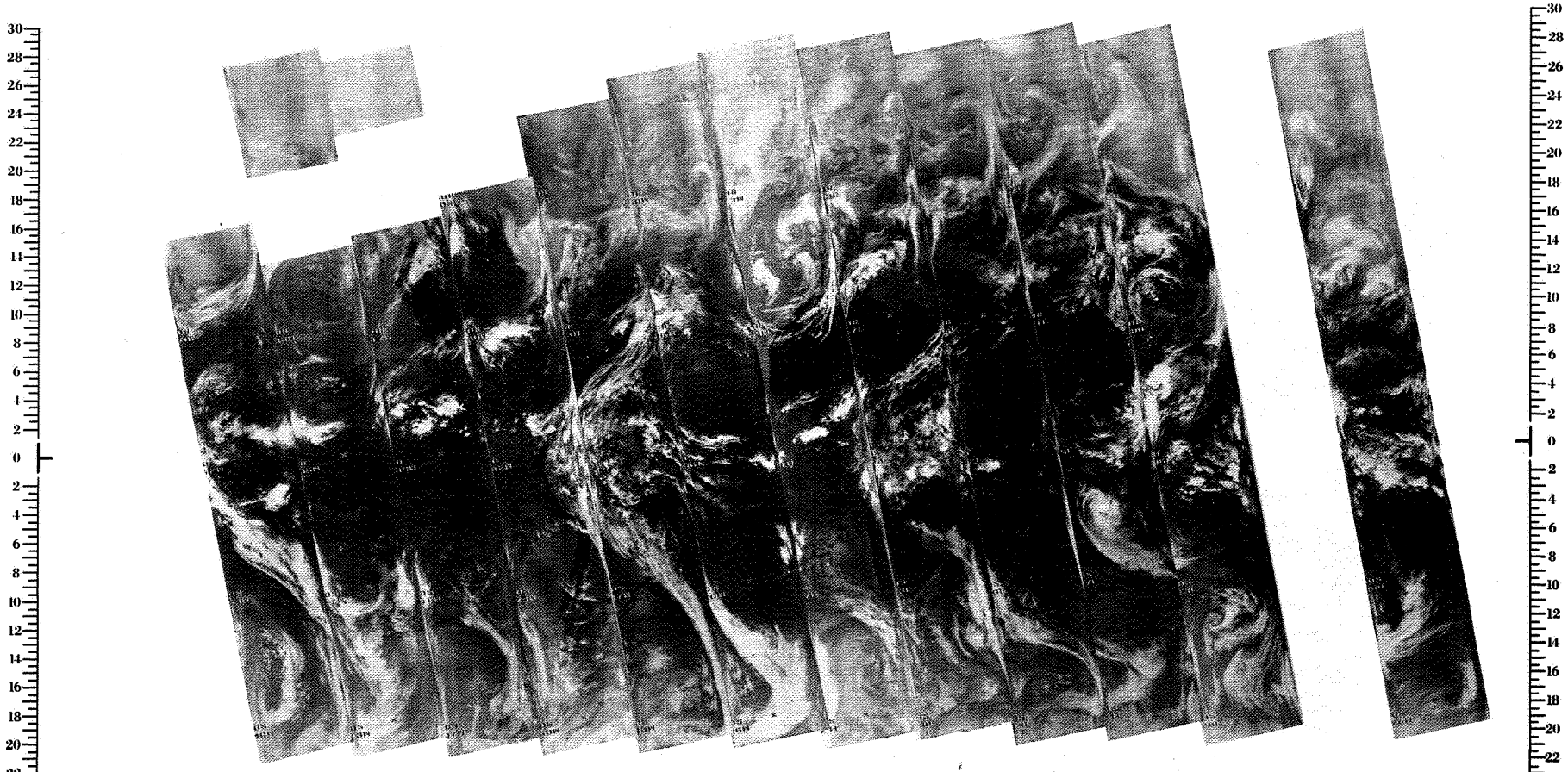

1888
1887
1886
1885
1884
1883
1882
1881
1880
1879
1878
1877
1876
30 APRIL 1973
6.7 μm
min.
min.

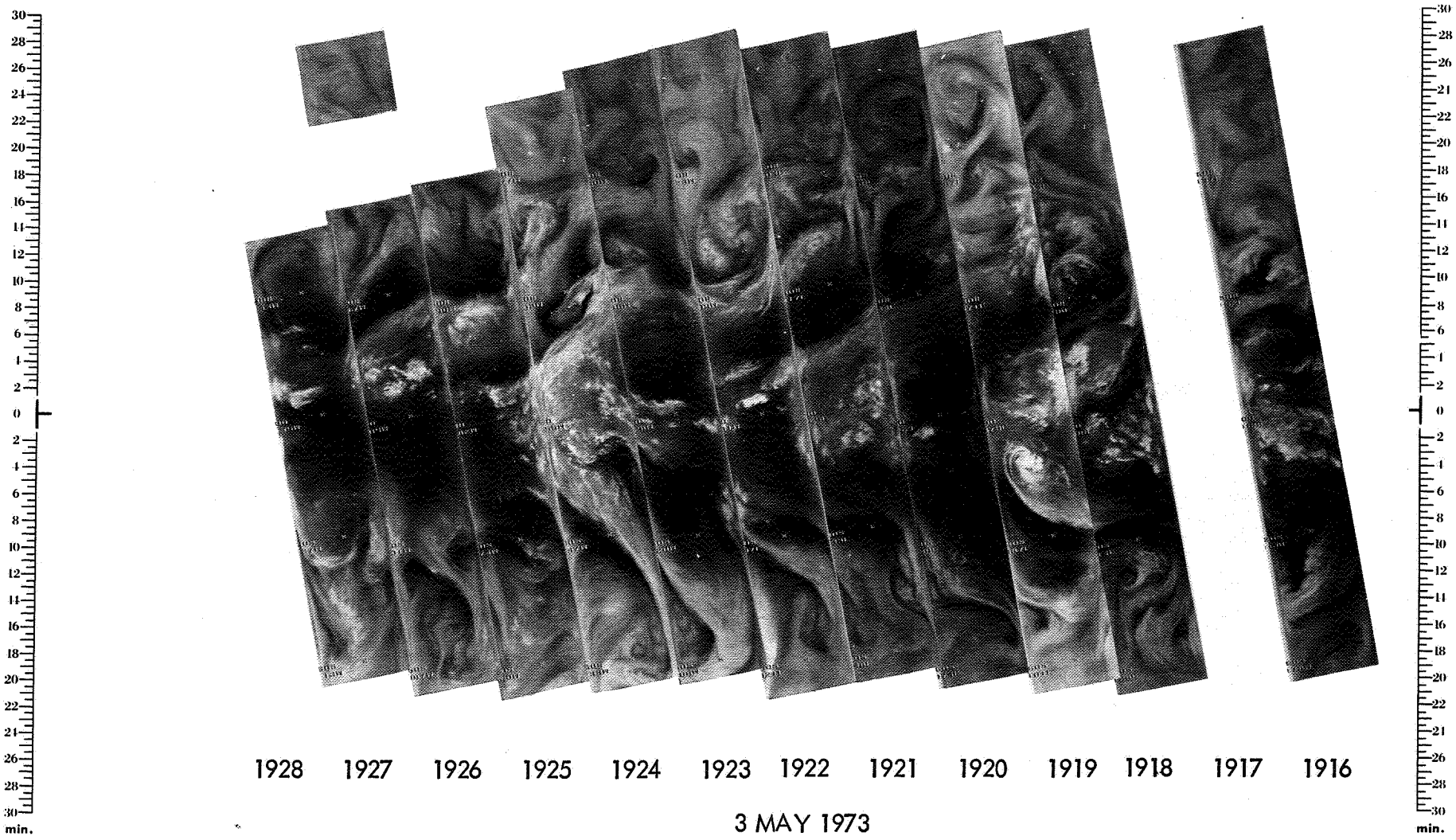

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1902 1901 1900 1899 1898 1897 1896 1895 1894 1893 1892 1891 1890 1889
1 MAY 1973
11.5 μm

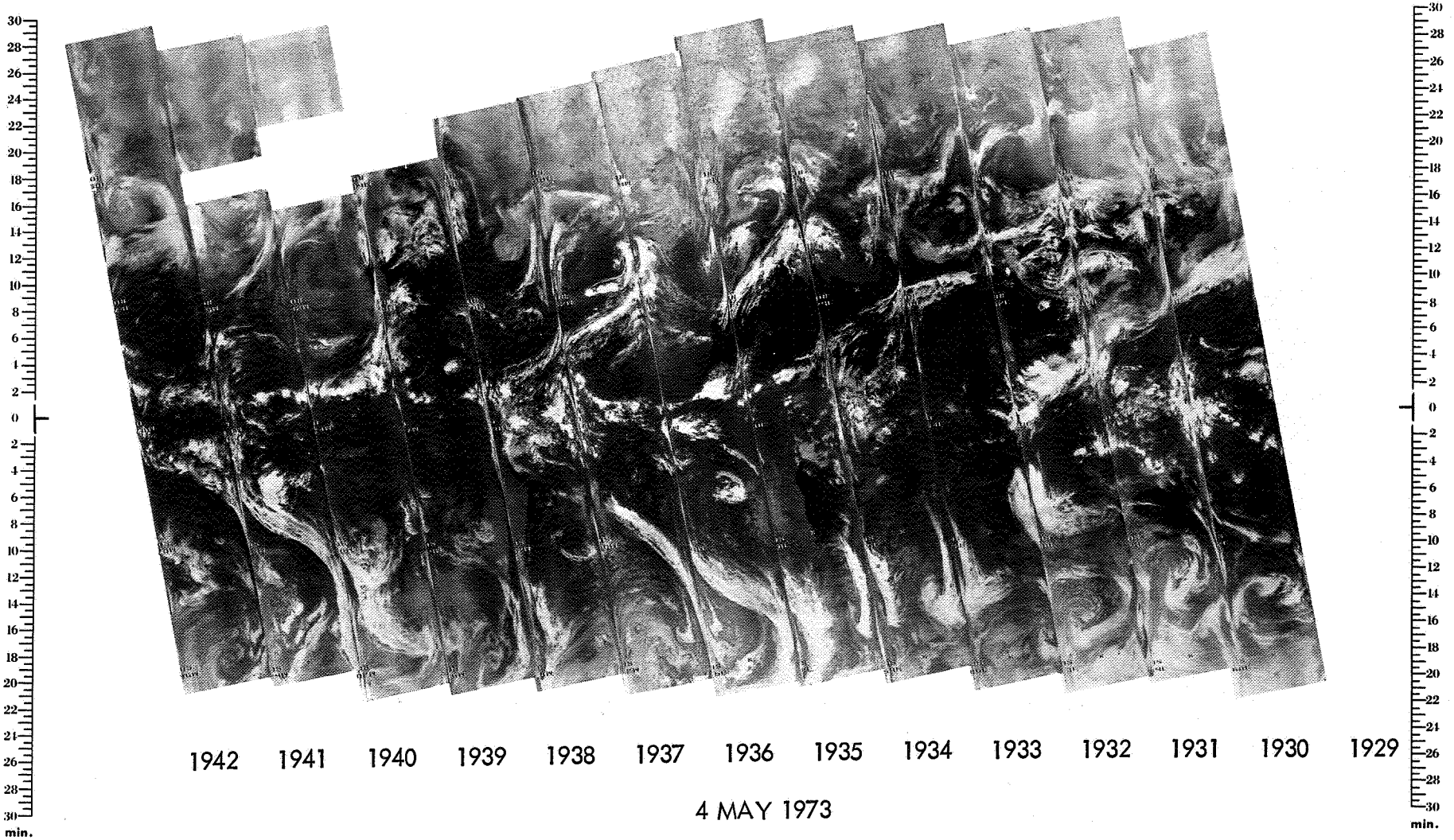

1902
1901
1900
1899
1898
1897
1896
1895
1894
1893
1892
1891
1890
1889
1 MAY 1973
6.7 μm
min.
min.

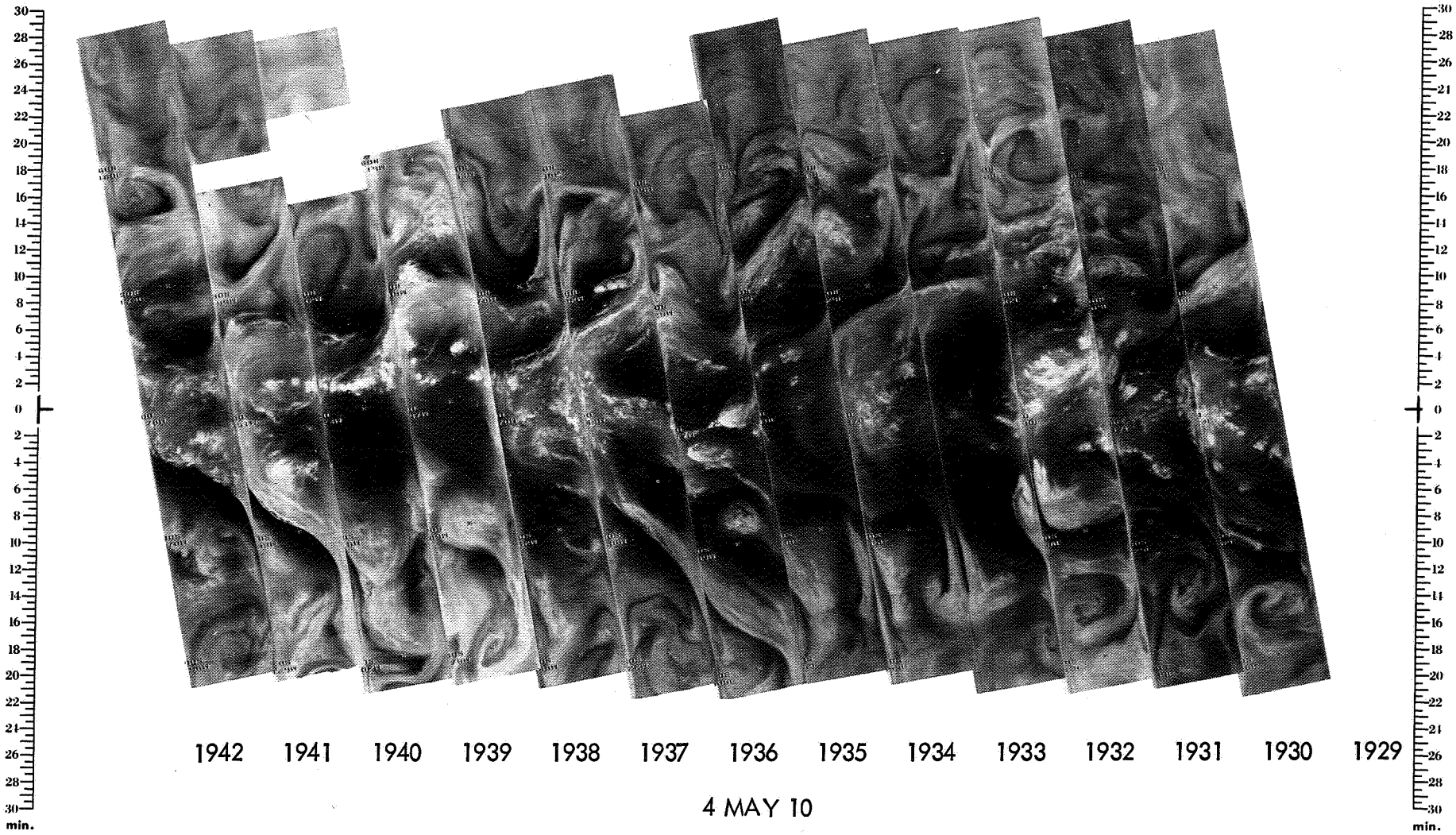

1915
1914
1913
1912
1911
1910
1909
1908
1907
1906
1905
1904
1903
2 MAY 1973
11.5 μm
min.
min.

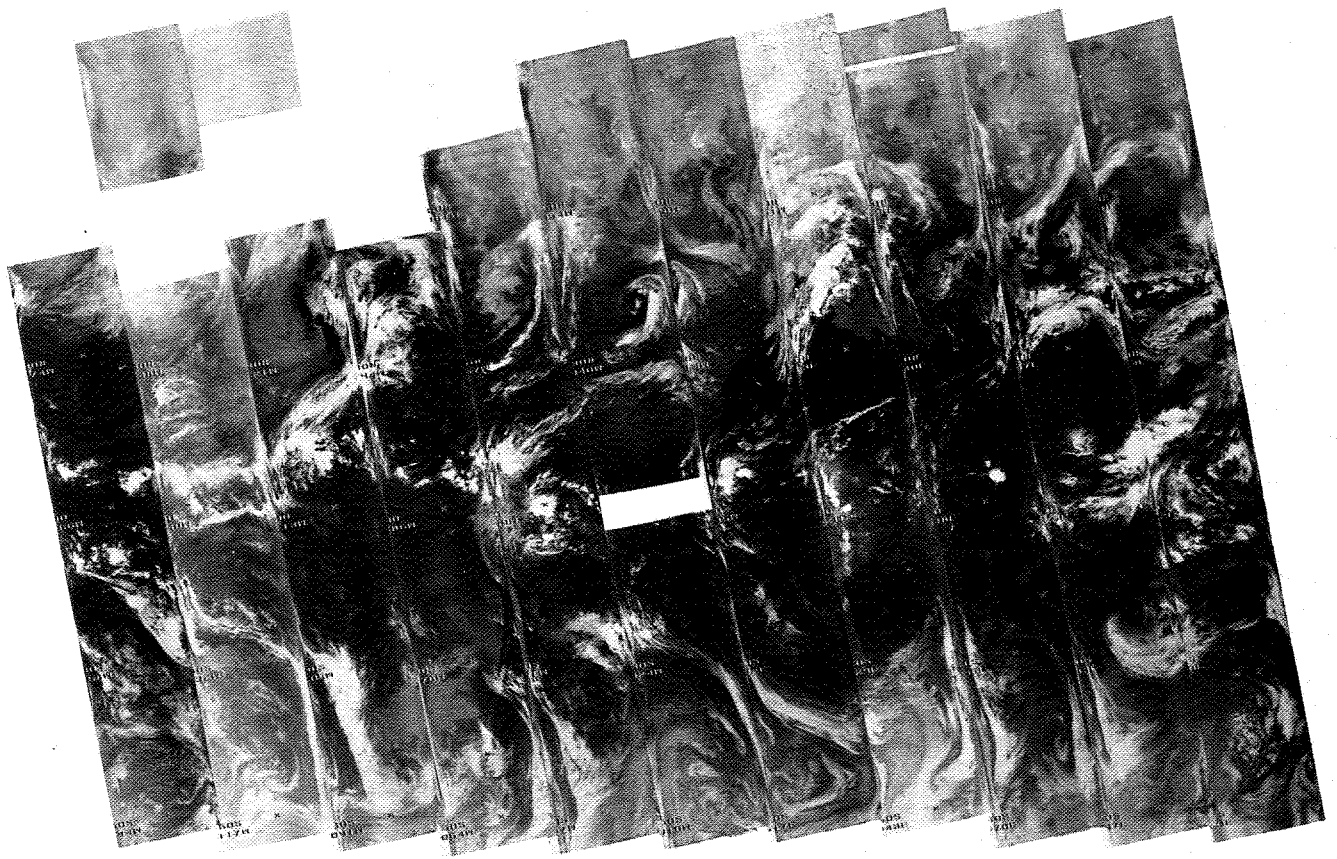

1915
1914
1913
1912
1911
1910
1909
1908
1907
1906
1905
1904
1903
2 MAY 1973
6.7 μm
min.
min.


1928
1927
1926
1925
1924
1923
1922
1921
1920
1919
1918
1917
1916
3 MAY 1973
11.5 μm
min.
min.


1928
1927
1926
1925
1924
1923
1922
1921
1920
1919
1918
1917
1916
3 MAY 1973
6.7 μm
min.
min.


1942
1941
1940
1939
1938
1937
1936
1935
1934
1933
1932
1931
1930
1929
4 MAY 1973
11.5 μm
min.
min.

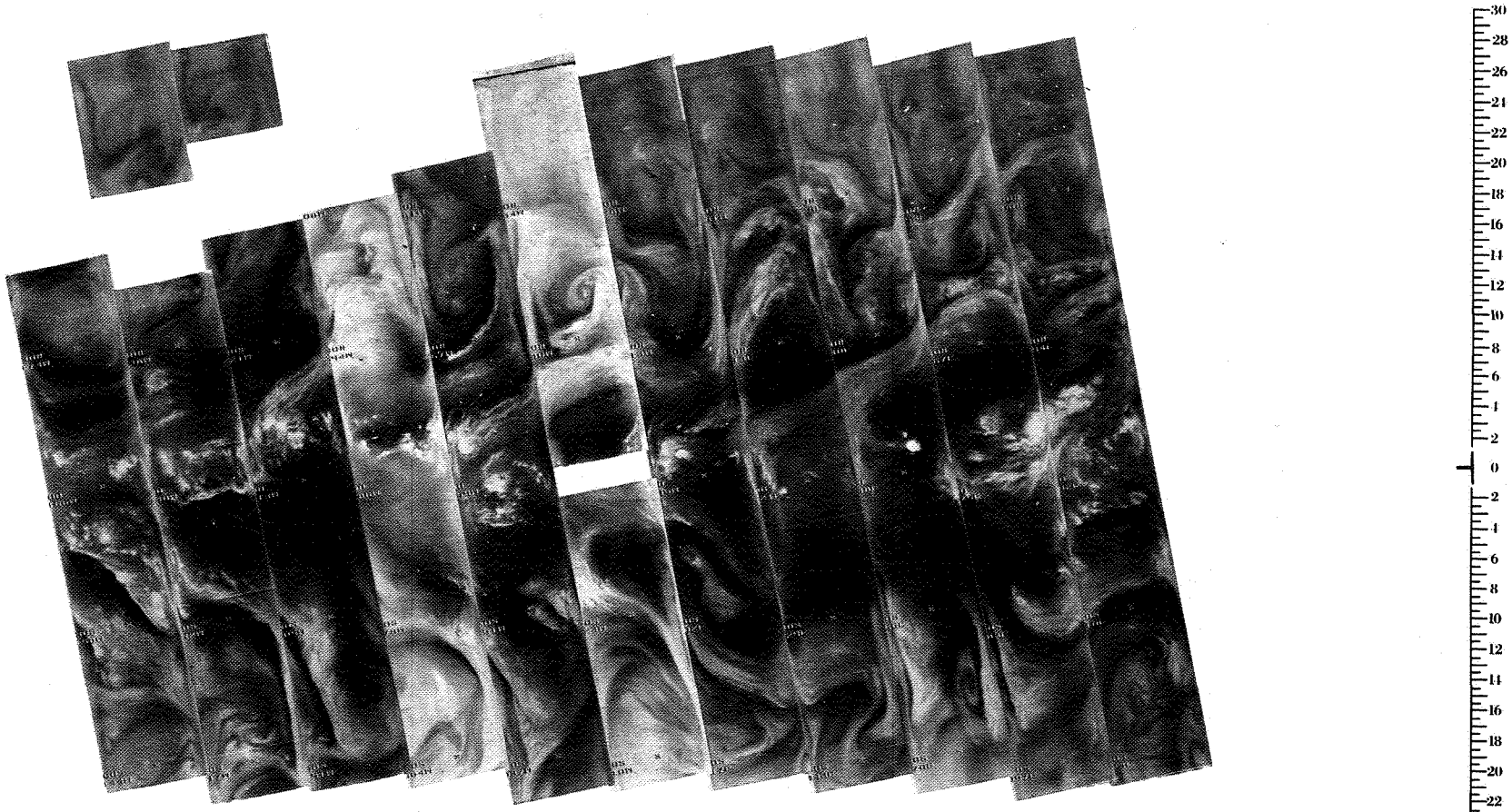

1942
1941
1940
1939
1938
1937
1936
1935
1934
1933
1932
1931
1930
1929
4 MAY 10
6.7 μm
min.
min.

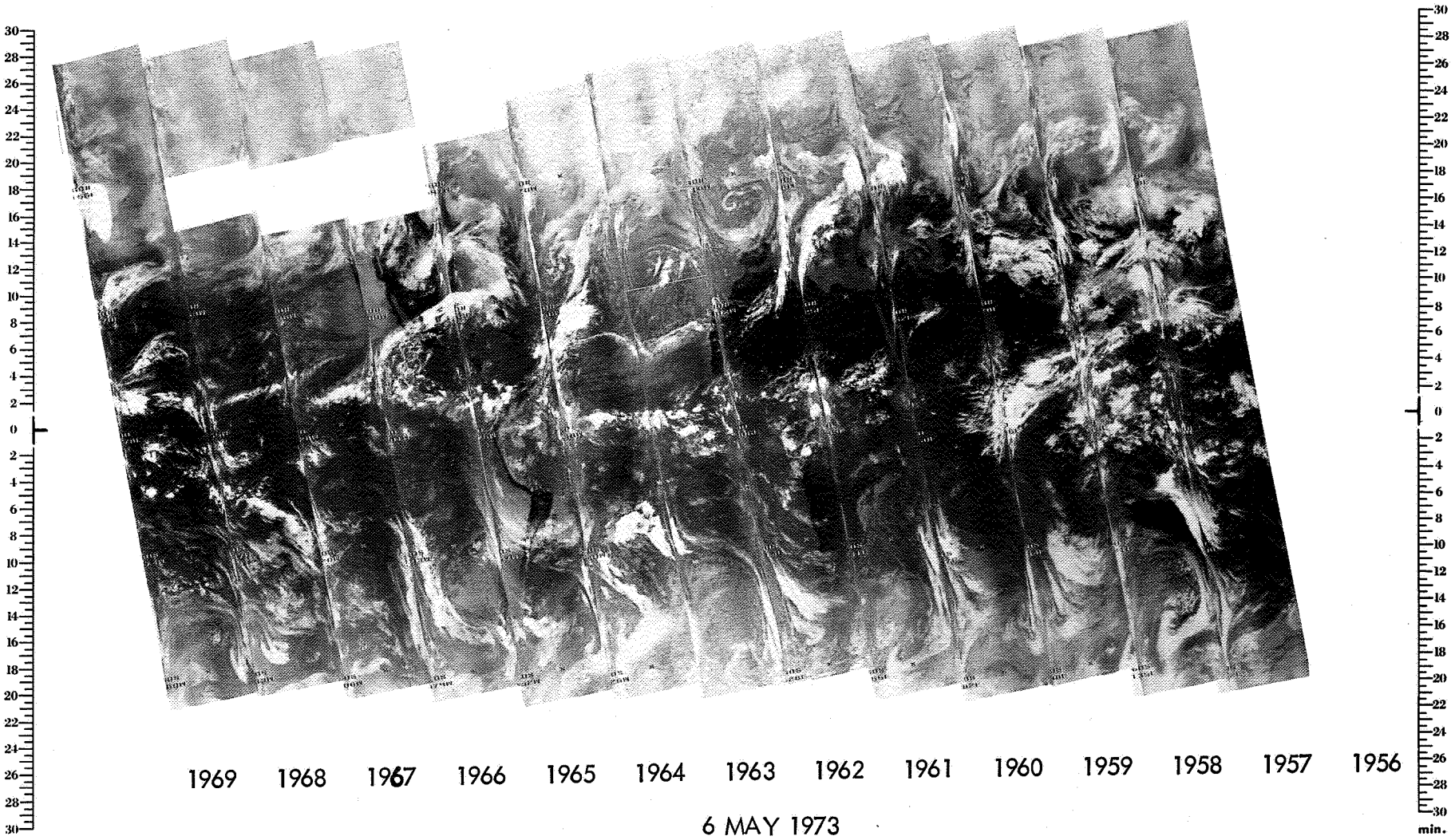


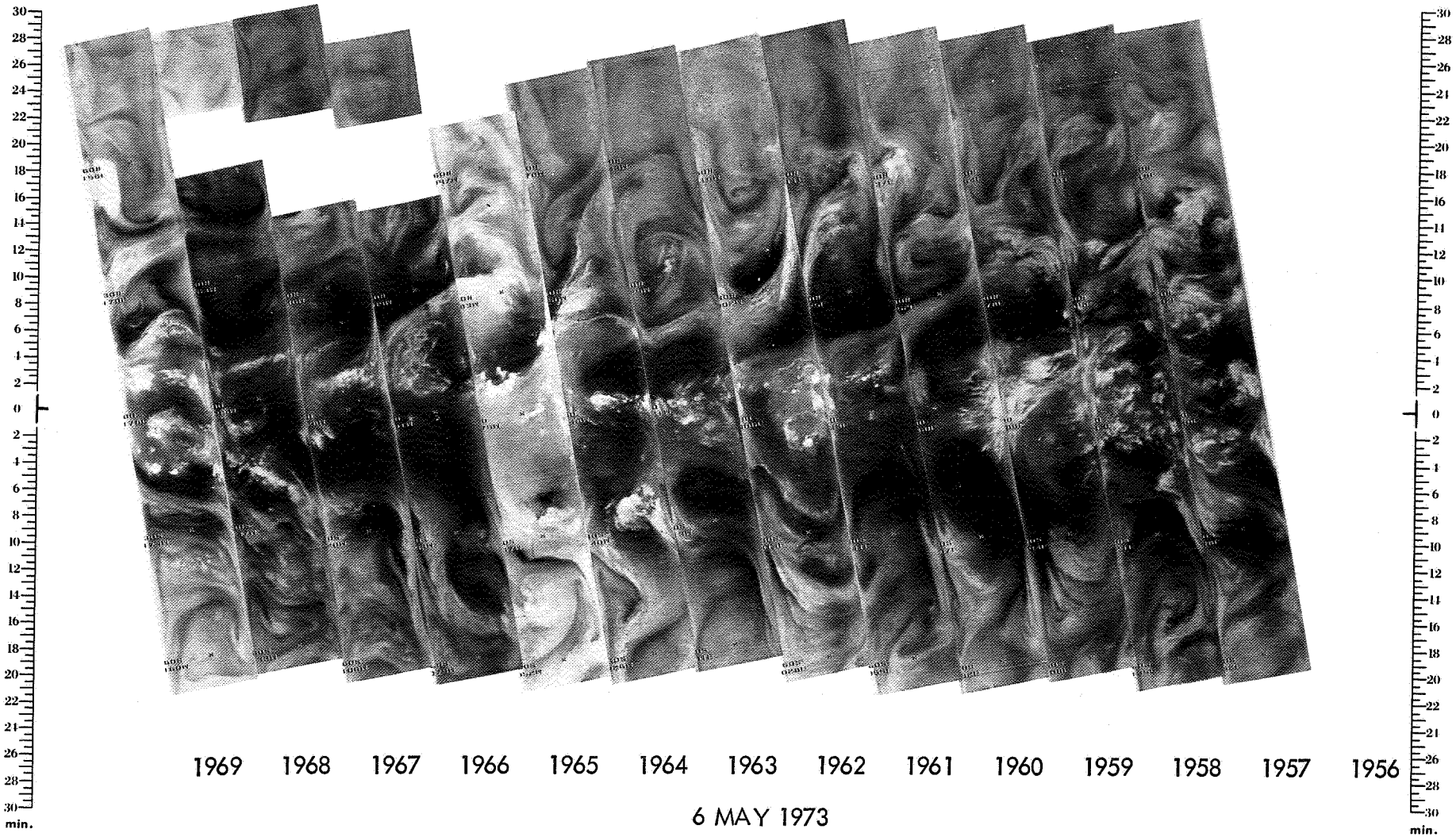
1955 1954 1953 1952 1951 1950 1949 1948 1947 1946 1945 1944 1943

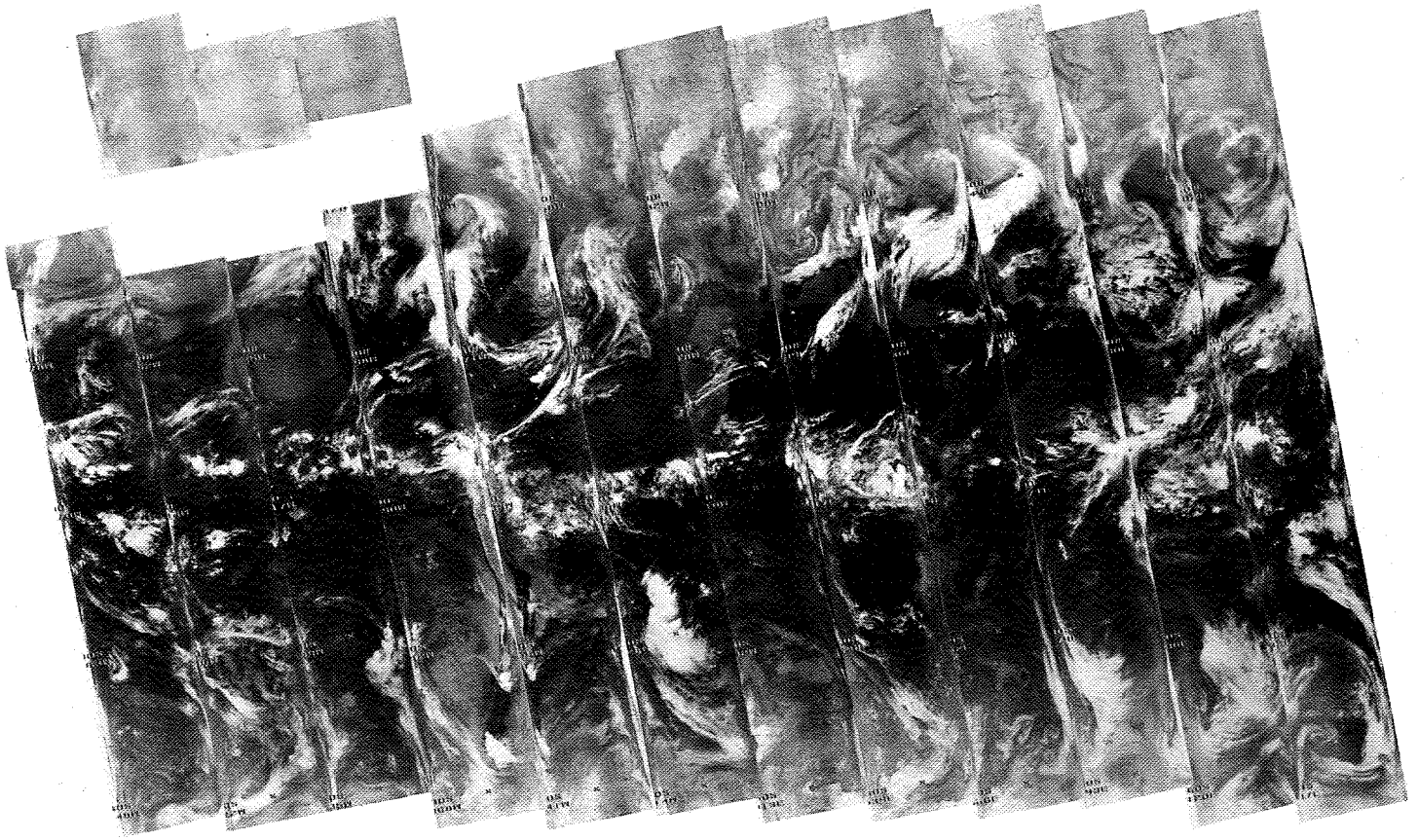
5 MAY 1973

11.5 μm


1955
1954
1953
1952
1951
1950
1949
1948
1947
1946
1945
1944
1943
5 MAY 1973
6.7 μm
min.
min.


1969
1968
1967
1966
1965
1964
1963
1962
1961
1960
1959
1958
1957
1956
6 MAY 1973
11.5 μm
min.
min.

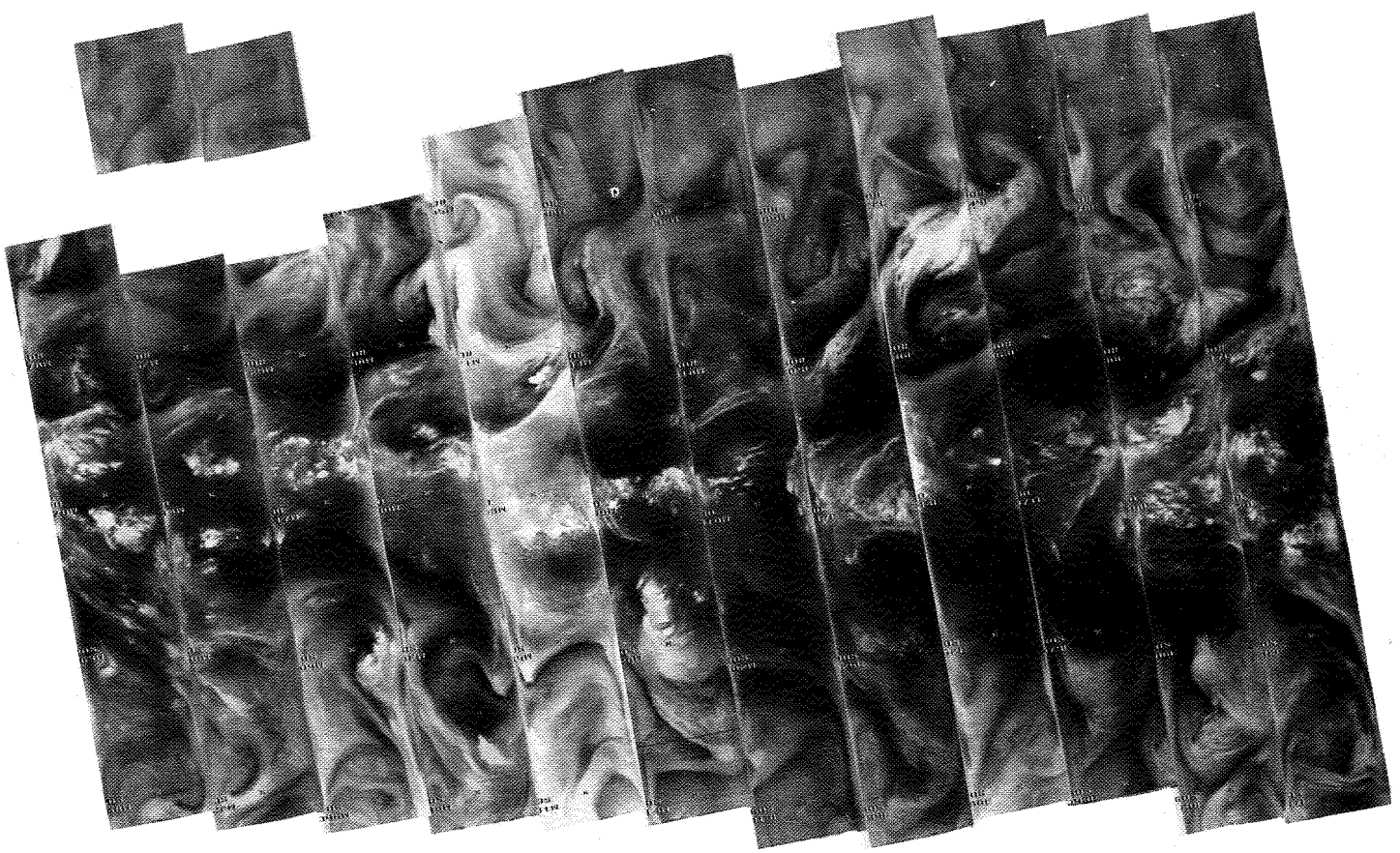

1969
1968
1967
1966
1965
1964
1963
1962
1961
1960
1959
1958
1957
1956
6 MAY 1973
6.7 μm
min.
min.



1982 1981 1980 1979 1978 1977 1976 1975 1974 1973 1972 1971 1970

7 MAY 1973

11.5 μm



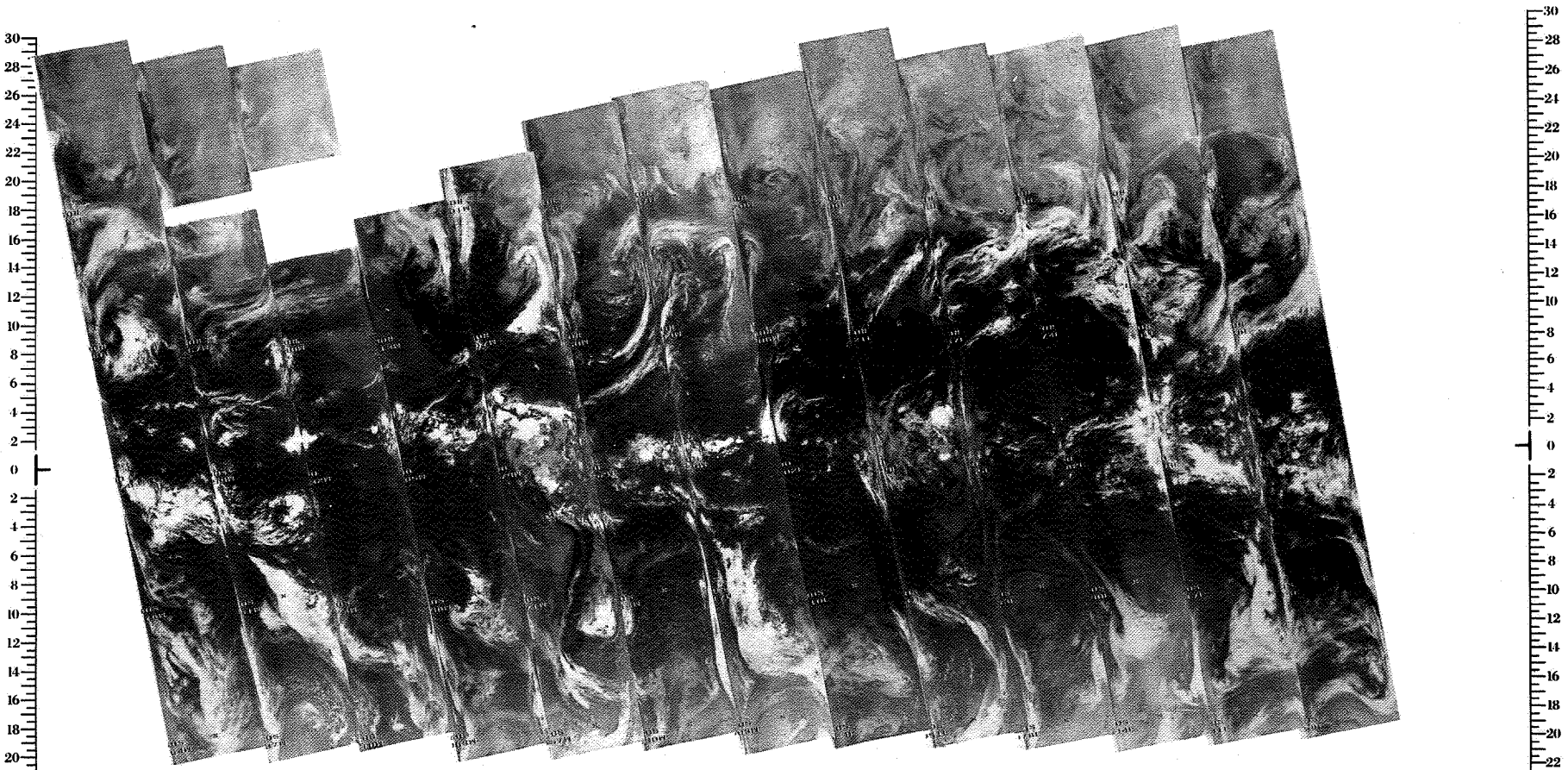
1982 1981 1980 1979 1978 1977 1976 1975 1974 1973 1972 1971 1970

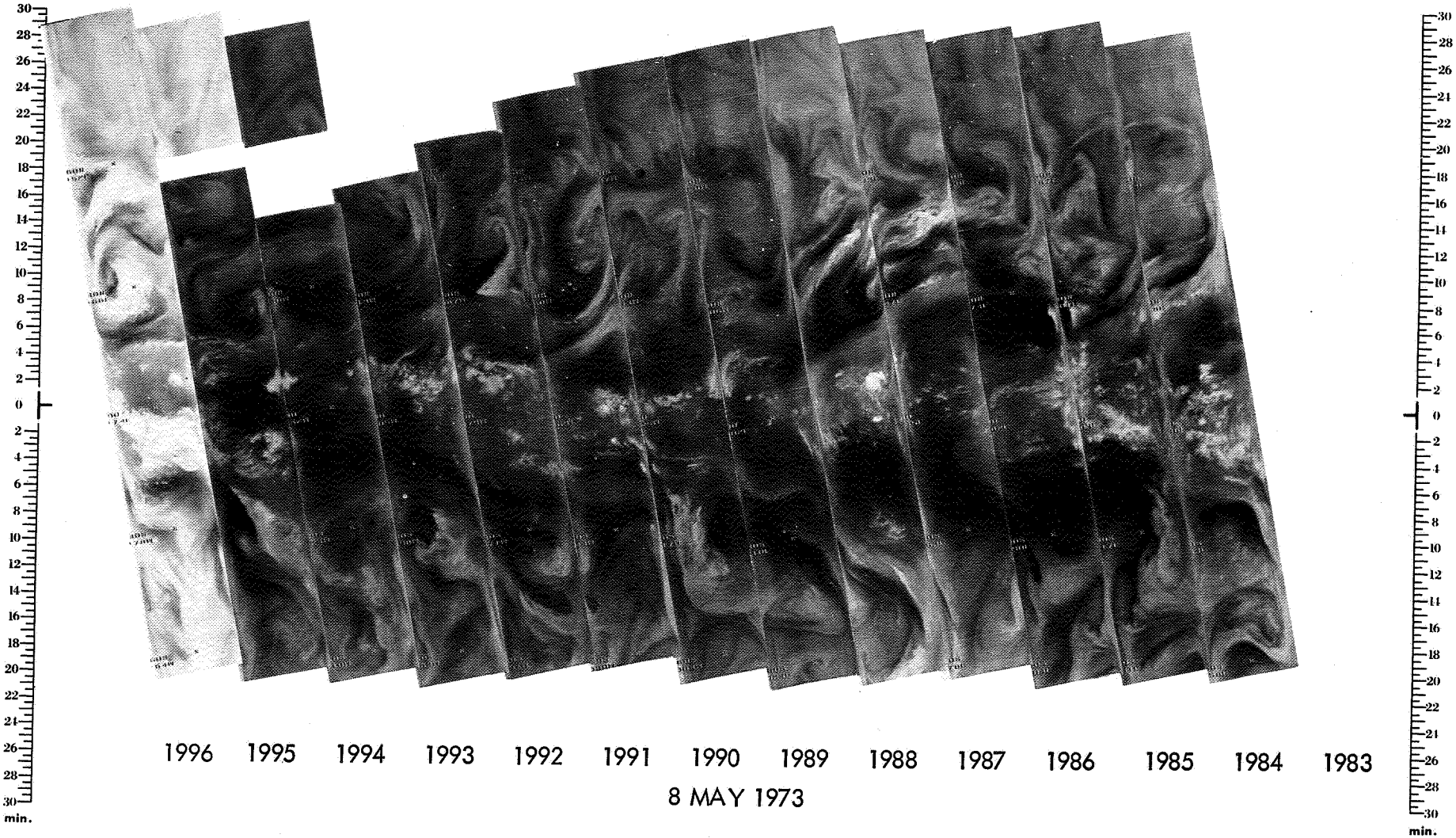
7 MAY 1973

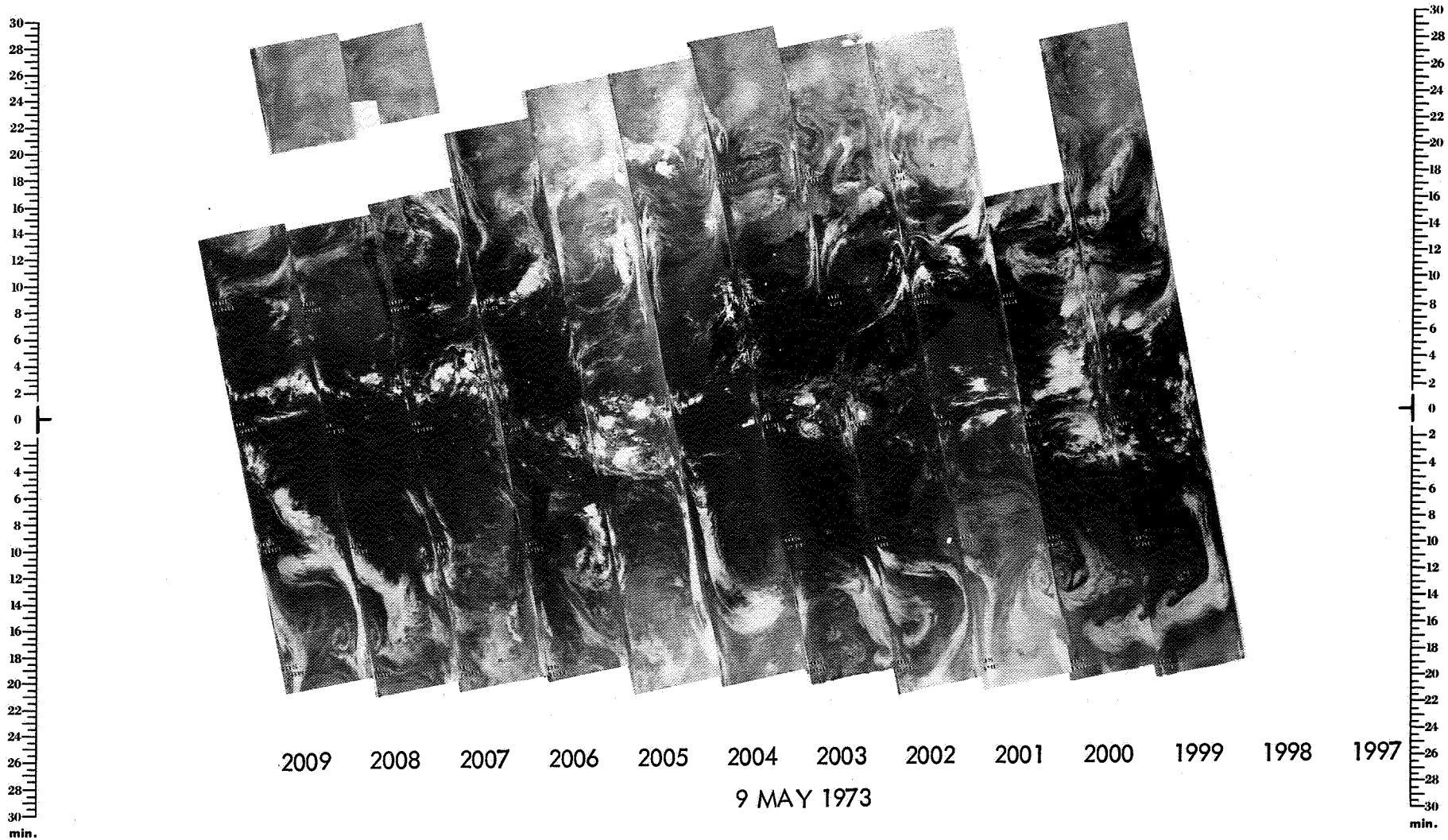
6.7 μm

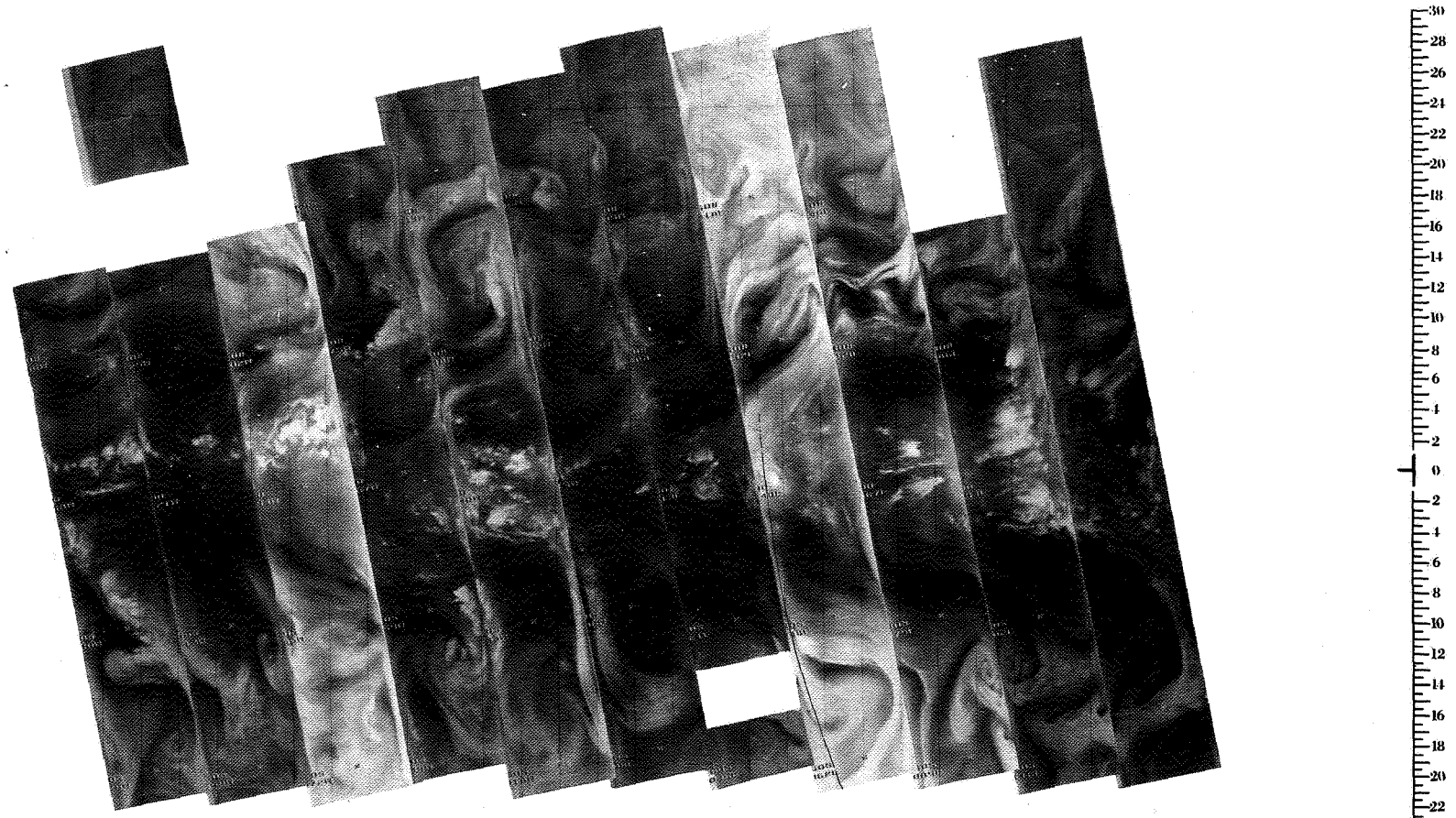
min.

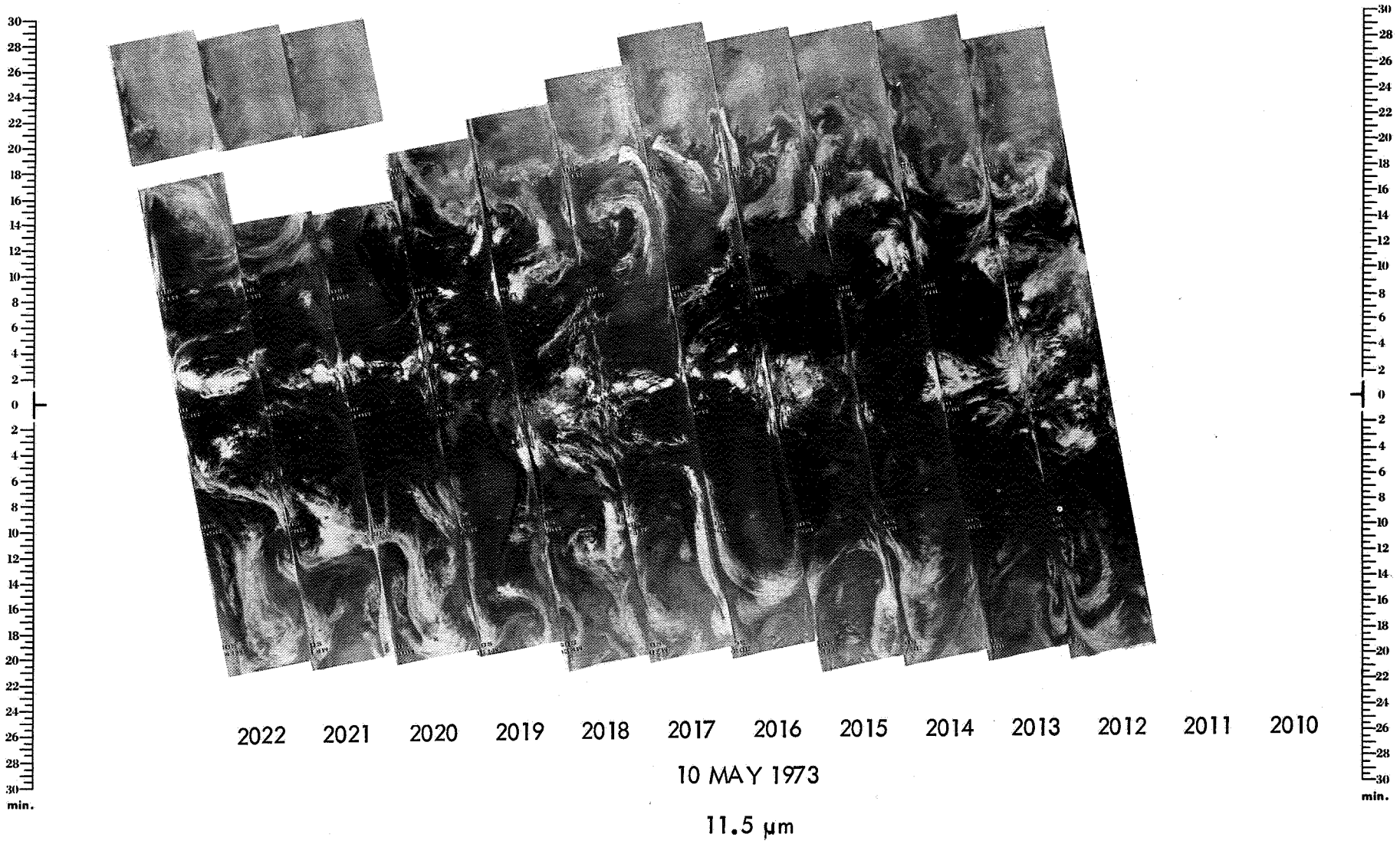
min.

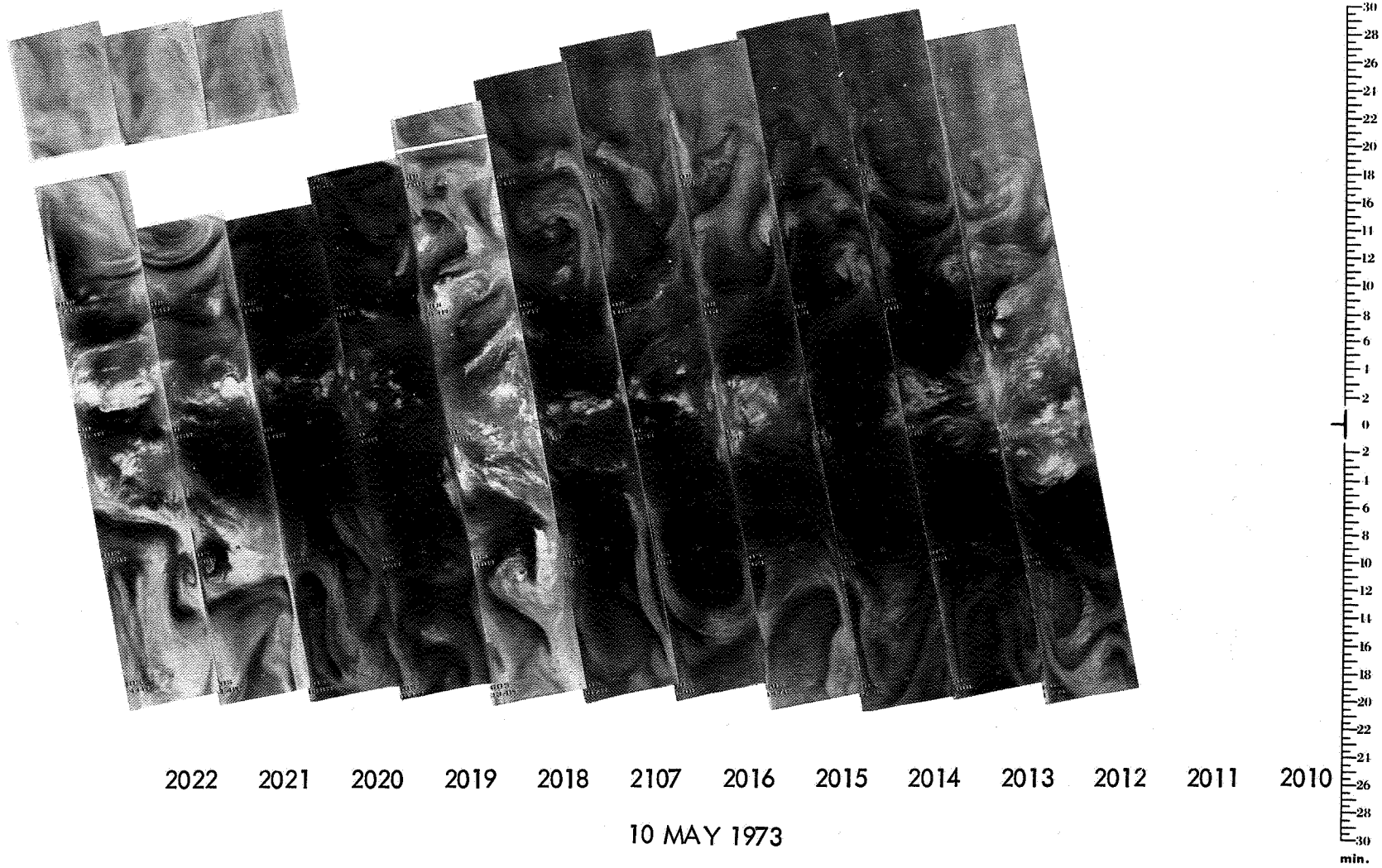

1996
1995
1994
1993
1992
1991
1990
1989
1988
1987
1986
1985
1984
1983
8 MAY 1973
11.5 μm
min.
min.

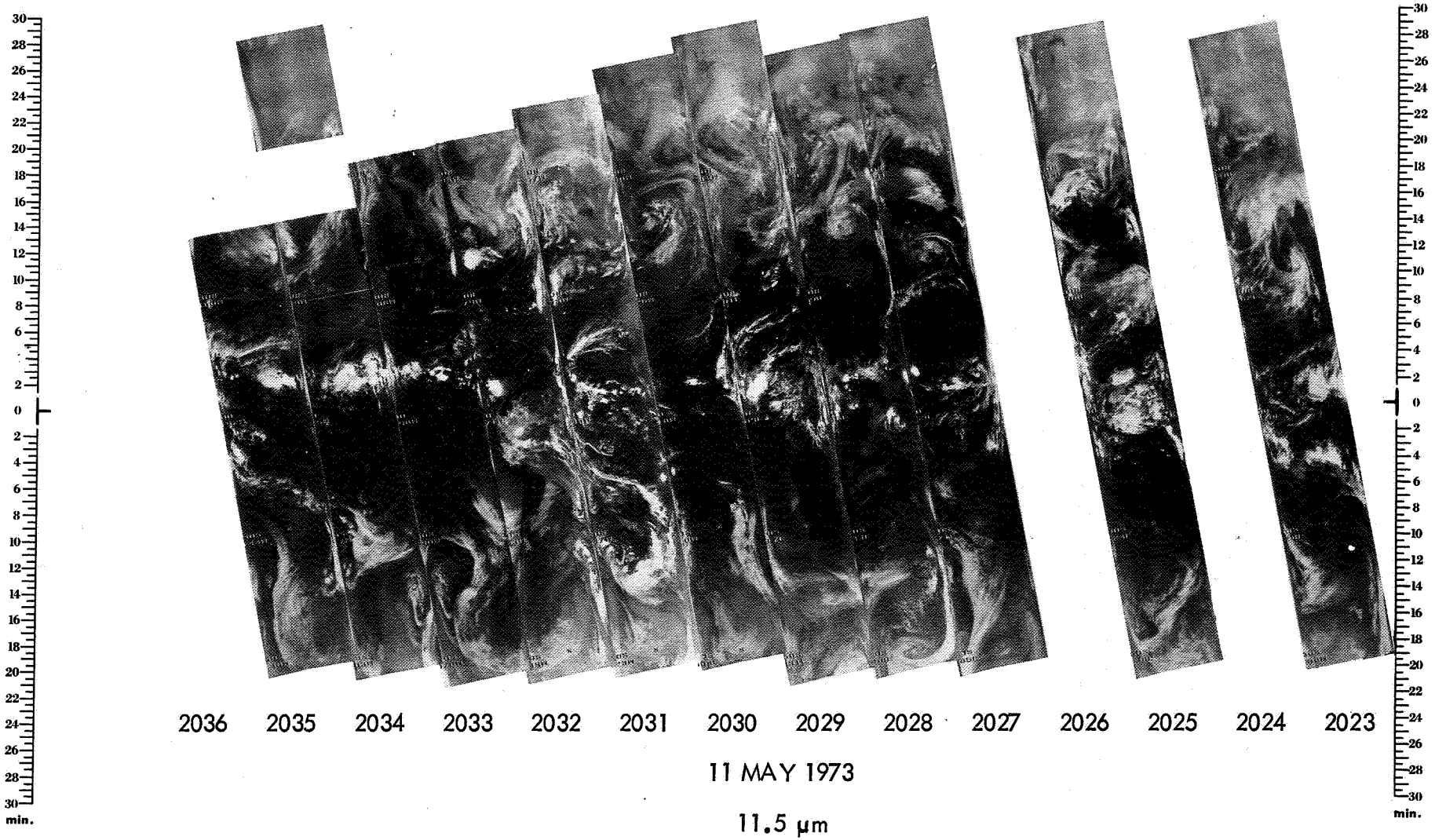

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
1996 1995 1994 1993 1992 1991 1990 1989 1988 1987 1986 1985 1984 1983
8 MAY 1973
6.7 μm

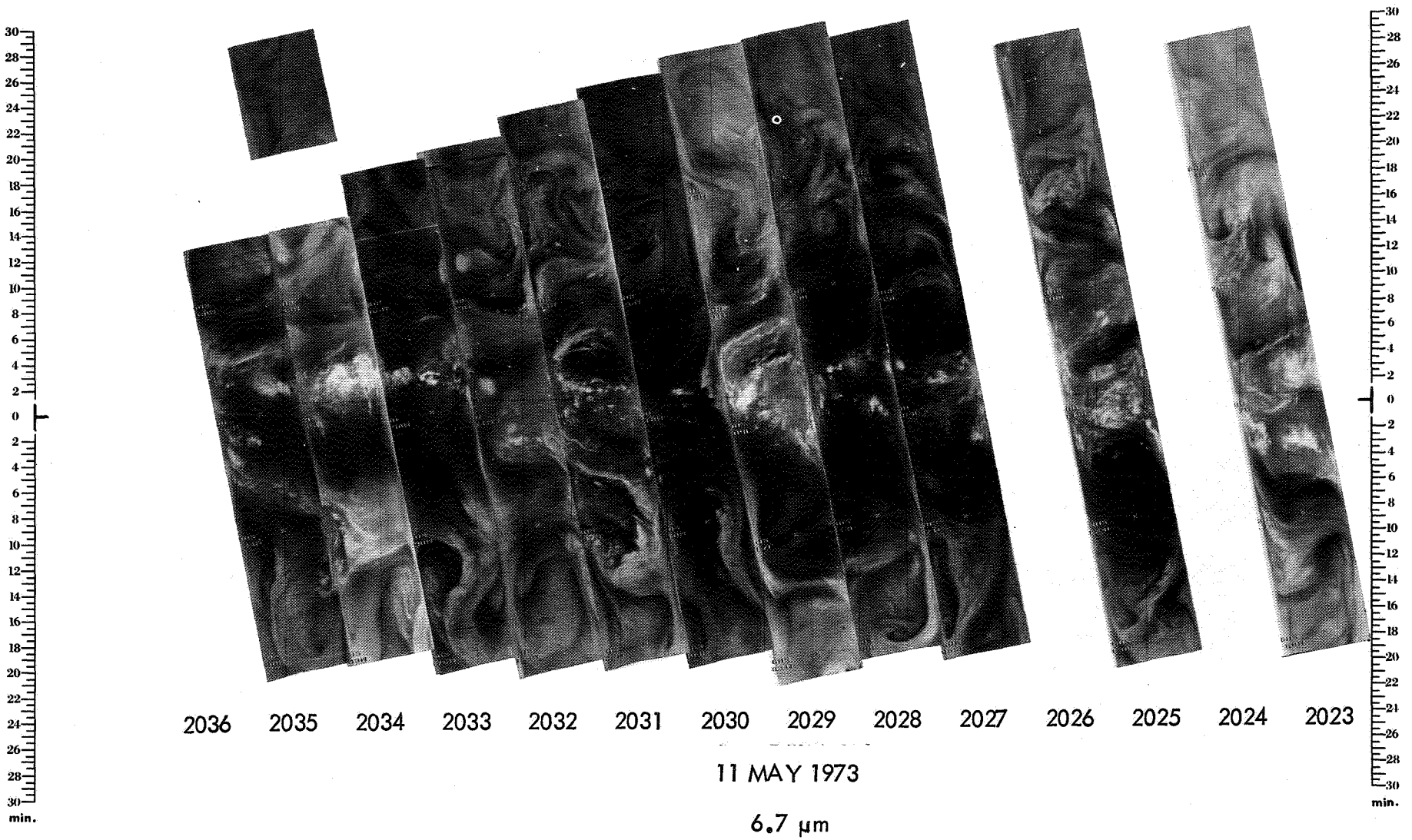

2009 2008 2007 2006 2005 2004 2003 2002 2001 2000 1999 1998 1997
9 MAY 1973
11.5 μm
min.
min.

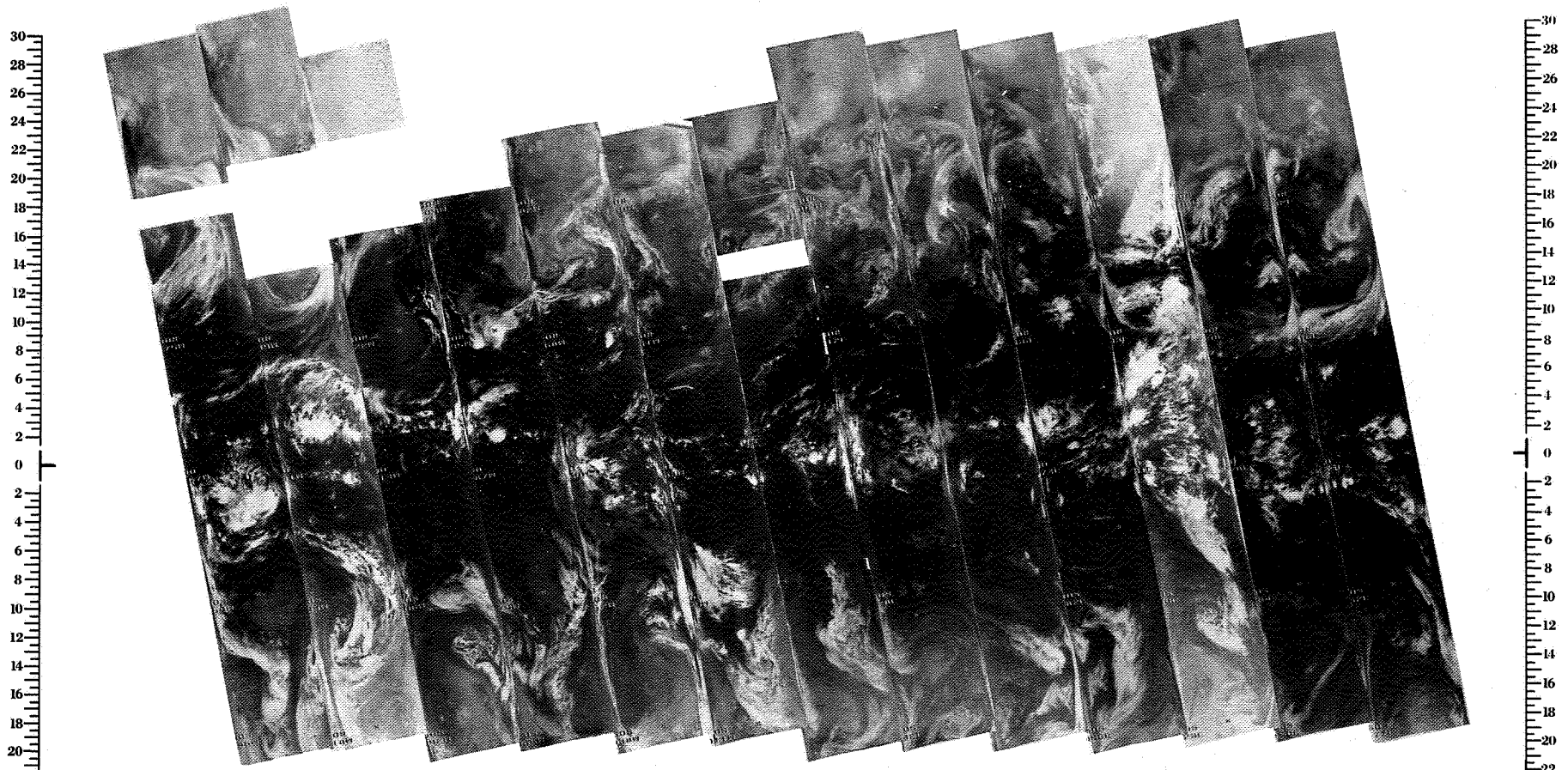

2009
2008
2007
2006
2005
2004
2003
2002
2001
2000
1999
1998
1997
9 MAY 1973
6.7 μm
min.

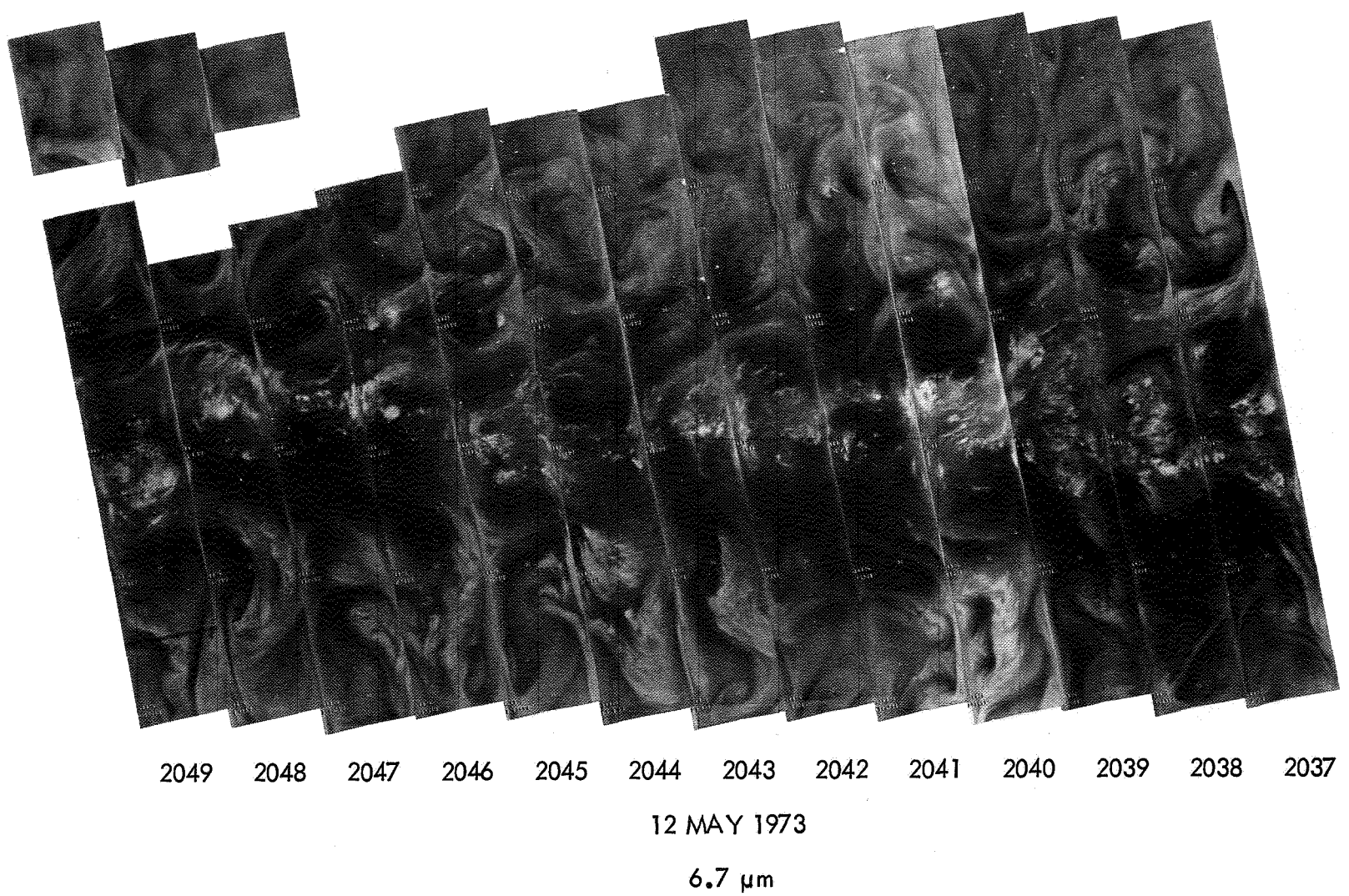

2022
2021
2020
2019
2018
2017
2016
2015
2014
2013
2012
2011
2010
10 MAY 1973
11.5 μm
min.
min.

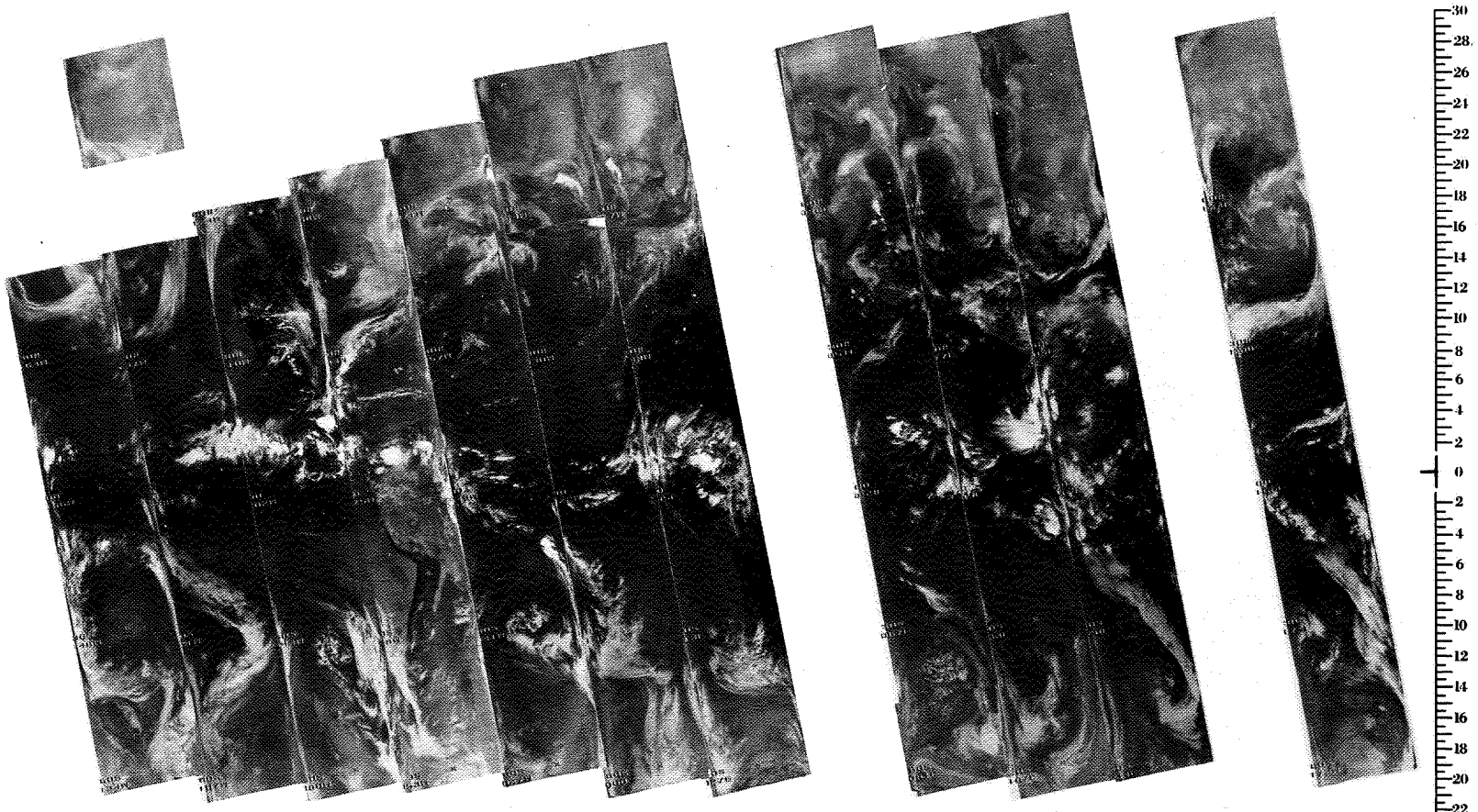

2022
2021
2020
2019
2018
2107
2016
2015
2014
2013
2012
2011
2010
10 MAY 1973
6.7 μm
min.
min.

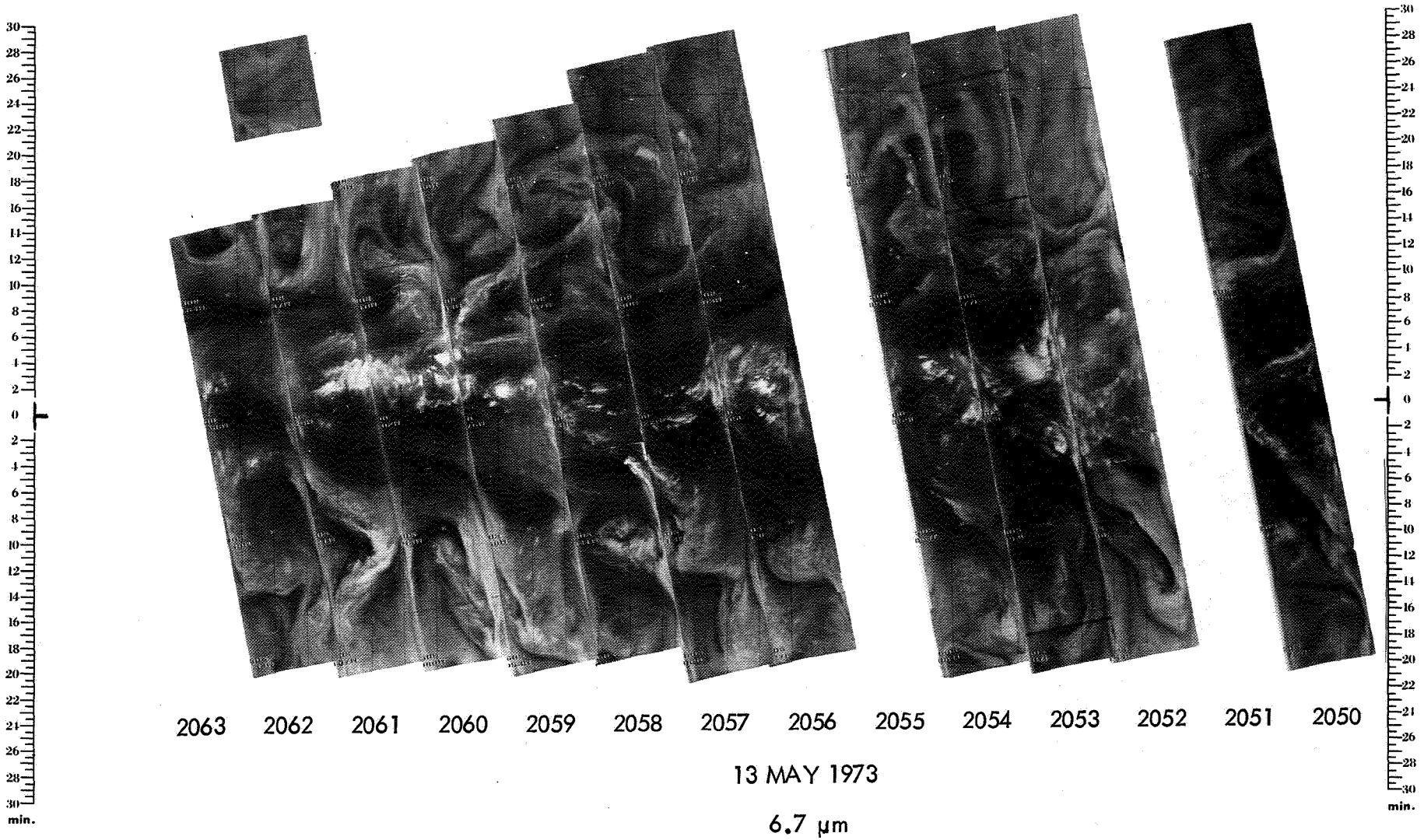

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2036 2035 2034 2033 2032 2031 2030 2029 2028 2027 2026 2025 2024 2023
11 MAY 1973
11.5 μm

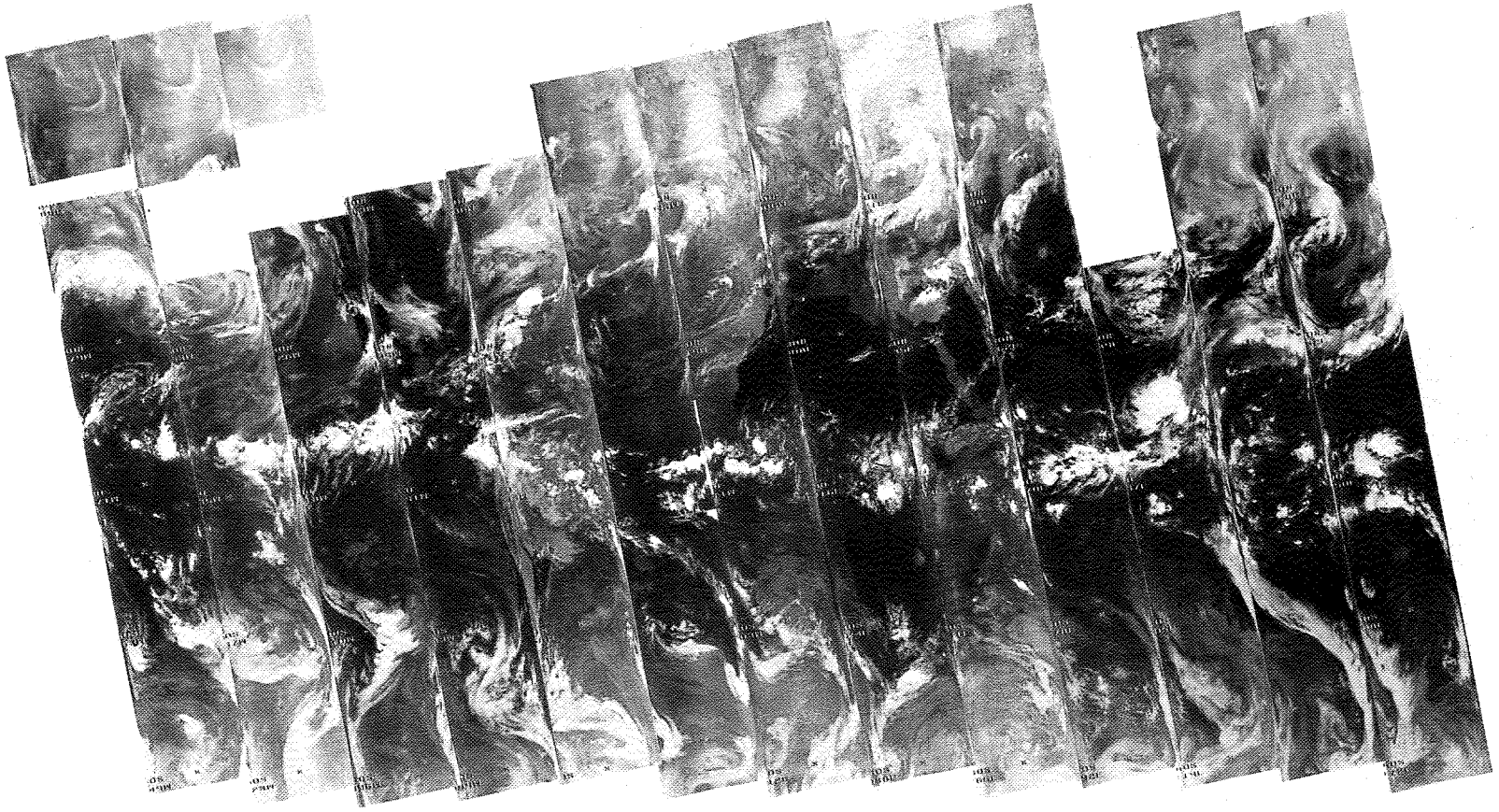

2036
2035
2034
2033
2032
2031
2030
2029
2028
2027
2026
2025
2024
2023
11 MAY 1973
6.7 μm
min.
min.

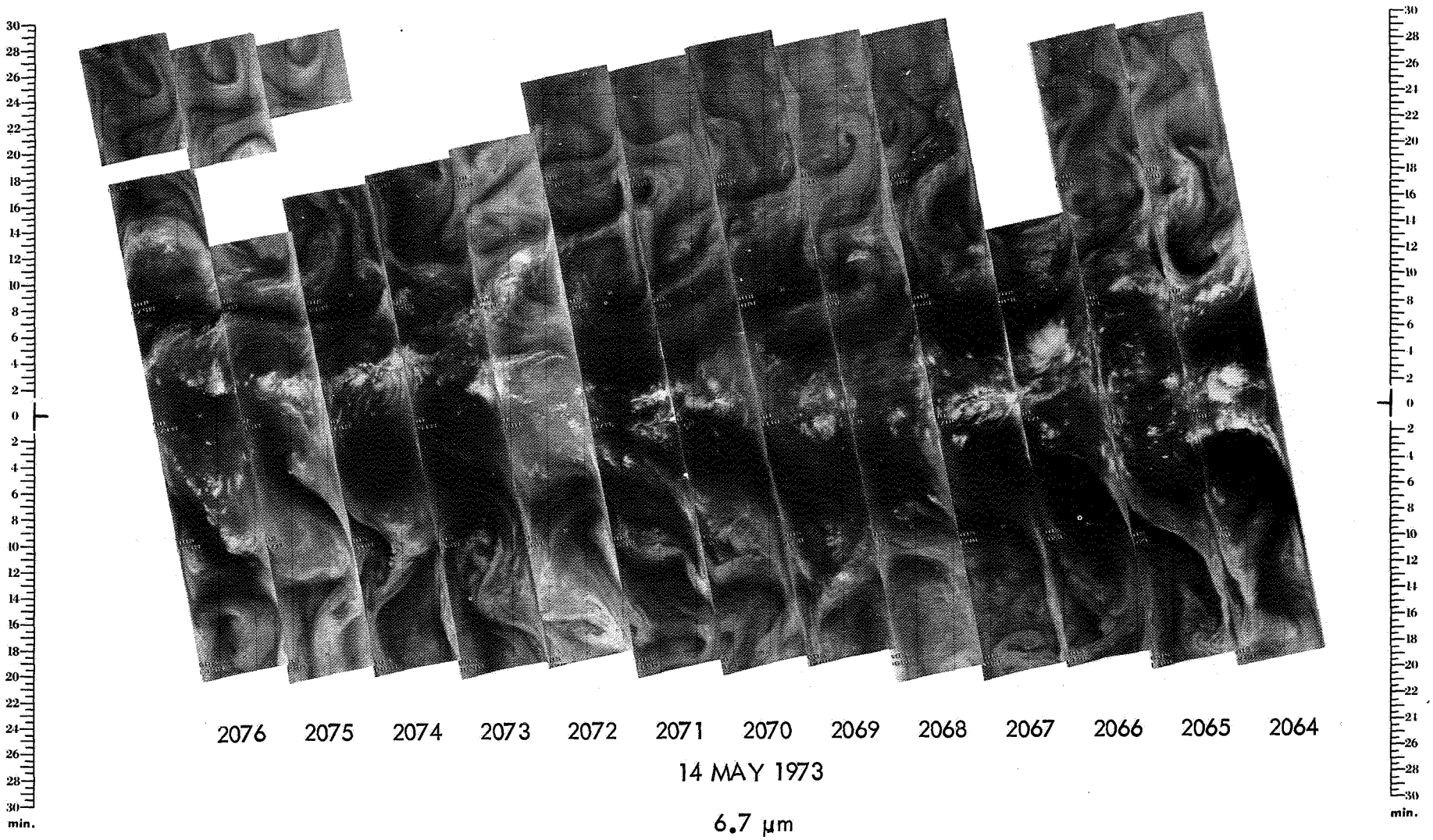

2049
2048
2047
2046
2045
2044
2043
2042
2041
2040
2039
2038
2037
12 MAY 1973
11.5 μm
min.
min.

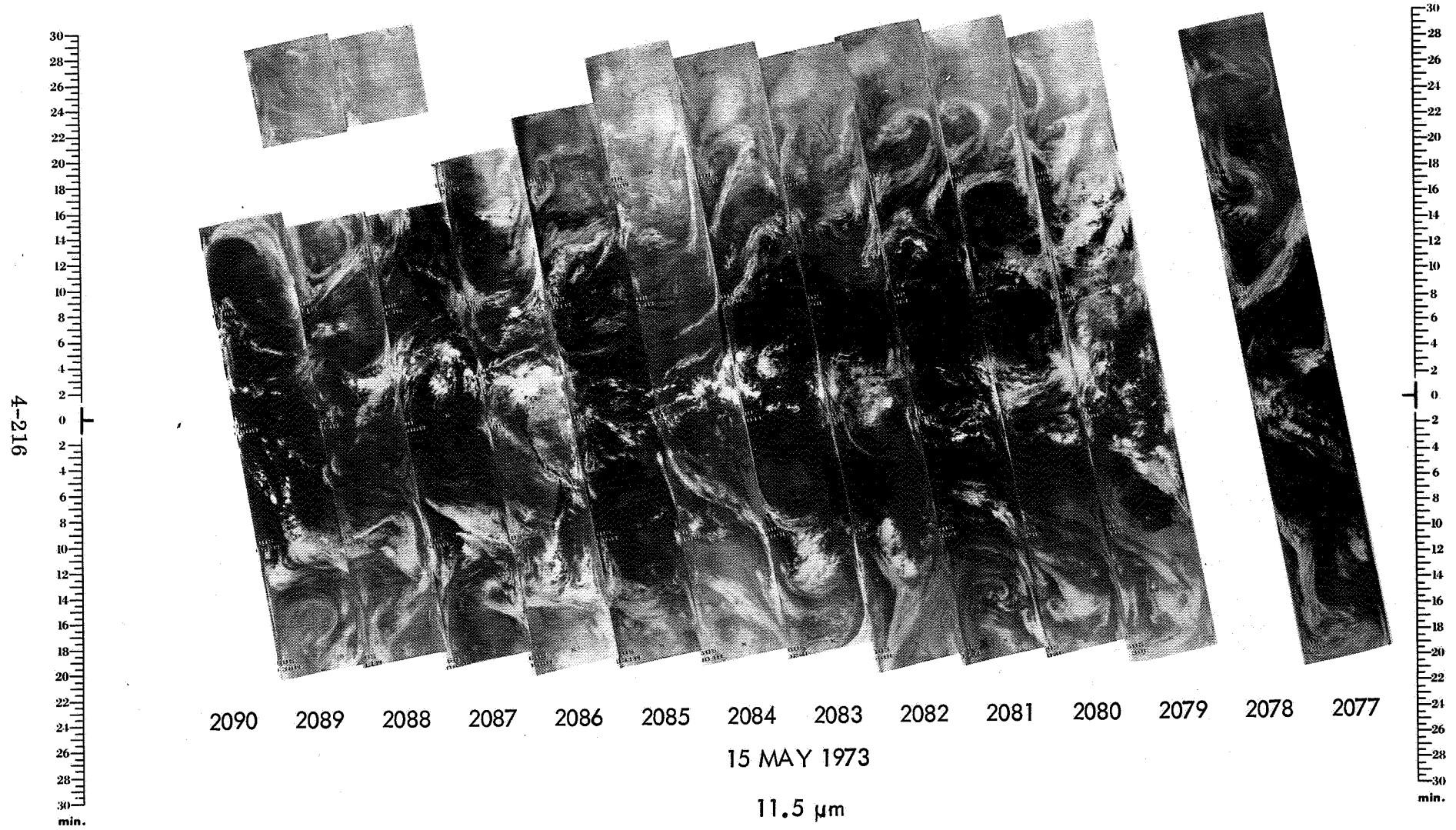

2049
2048
2047
2046
2045
2044
2043
2042
2041
2040
2039
2038
2037
12 MAY 1973
6.7 μm
min.
min.

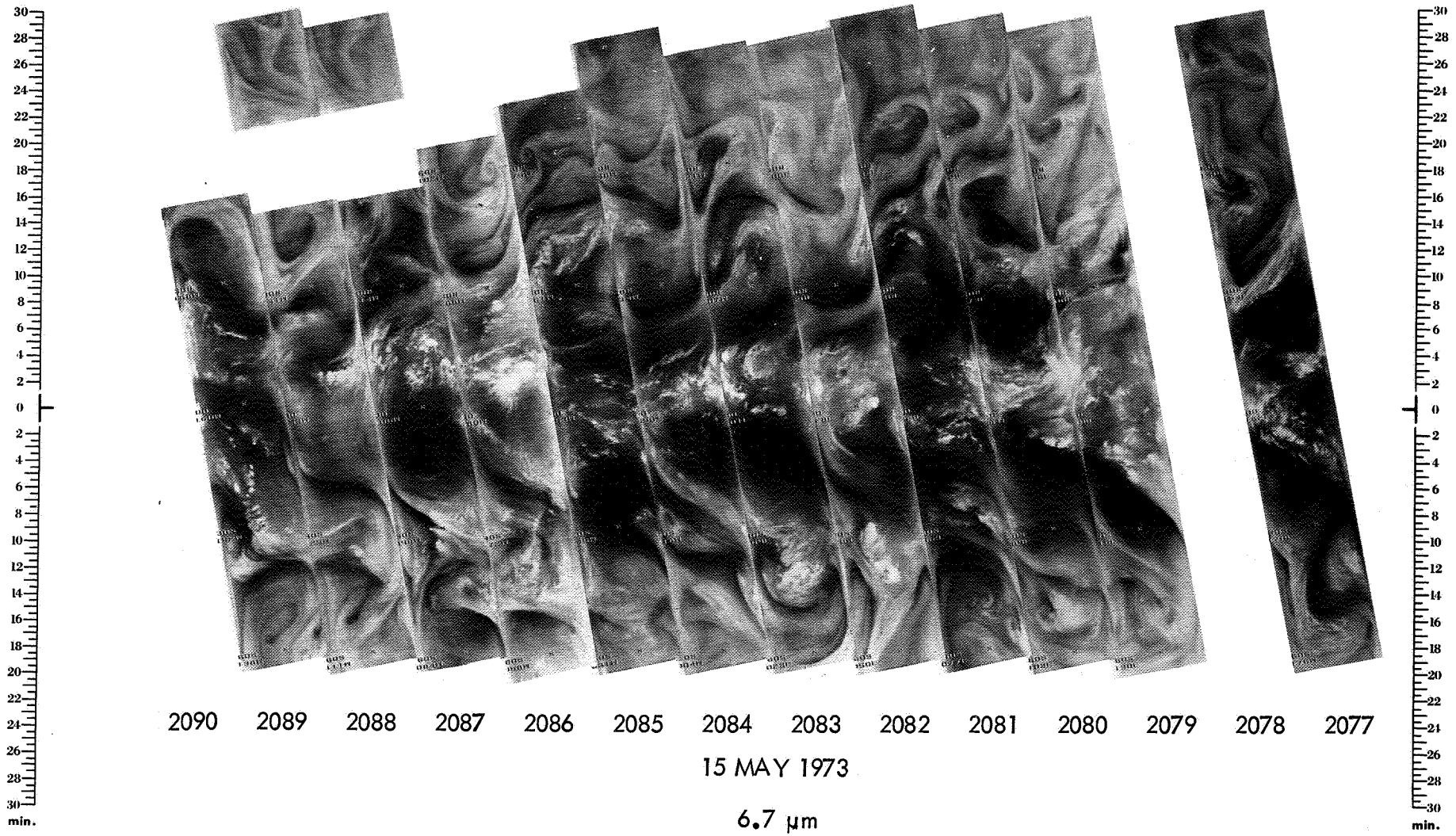

2063
2062
2061
2060
2059
2058
2057
2056
2055
2054
2053
2052
2051
2050
13 MAY 1973
11.5 μm
min.
min.


2063
2062
2061
2060
2059
2058
2057
2056
2055
2054
2053
2052
2051
2050
13 MAY 1973
6.7 μm
min.
min.

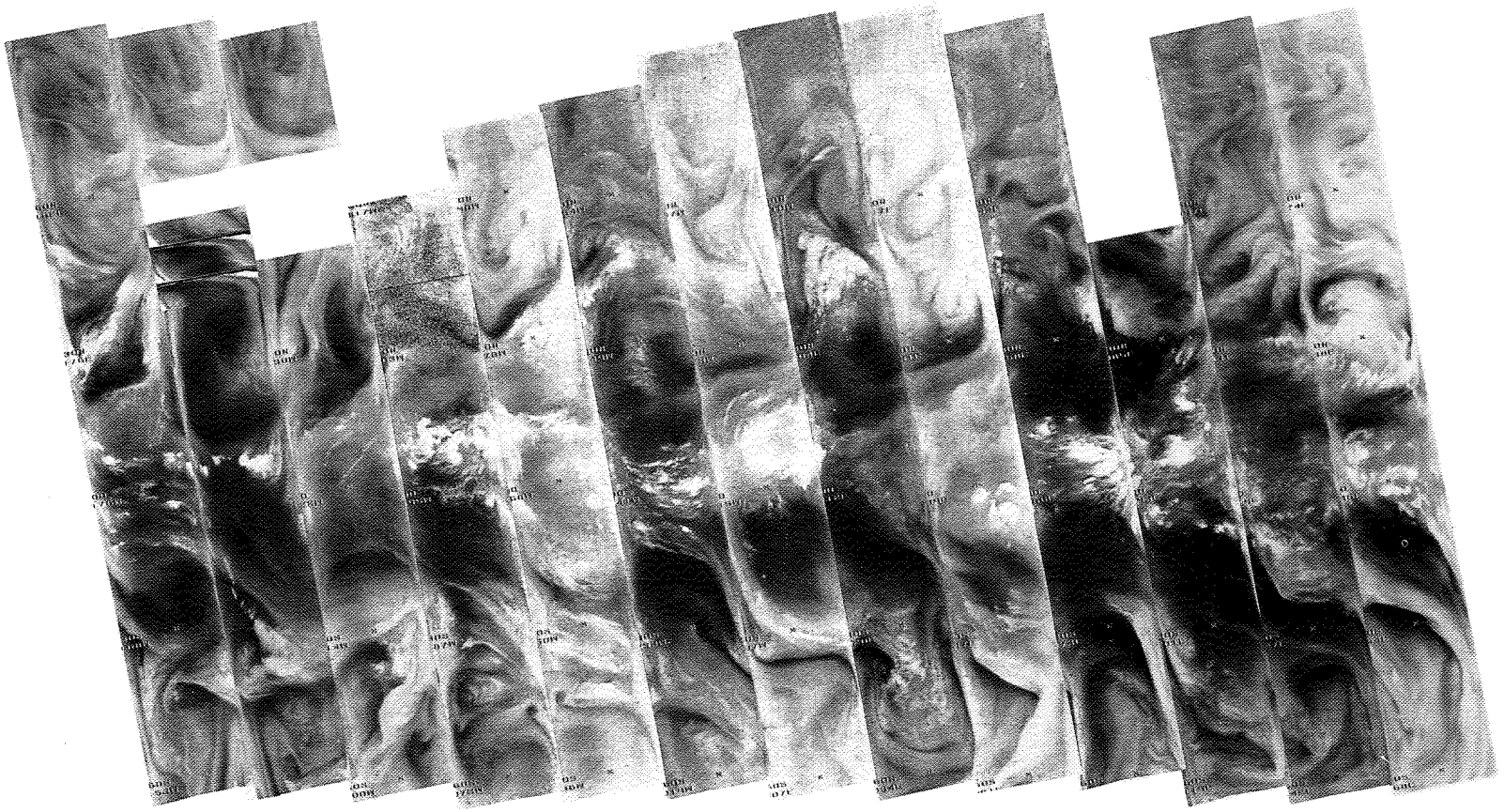

2076 2075 2074 2073 2072 2071 2070 2069 2068 2067 2066 2065 2064
14 MAY 1973
11.5 μm
min.
min.

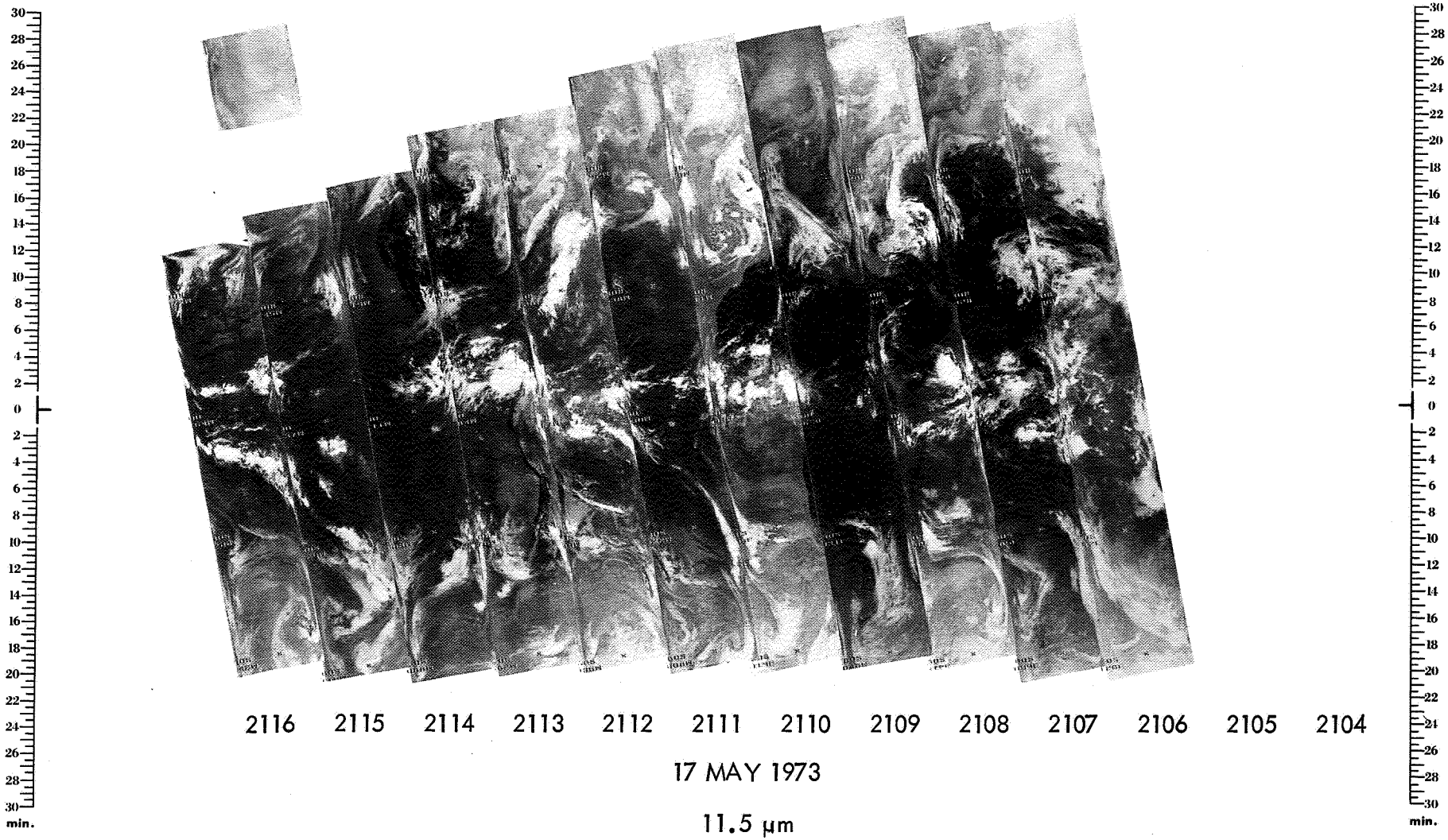

2076
2075
2074
2073
2072
2071
2070
2069
2068
2067
2066
2065
2064
14 MAY 1973
6.7 μm
min.
min.

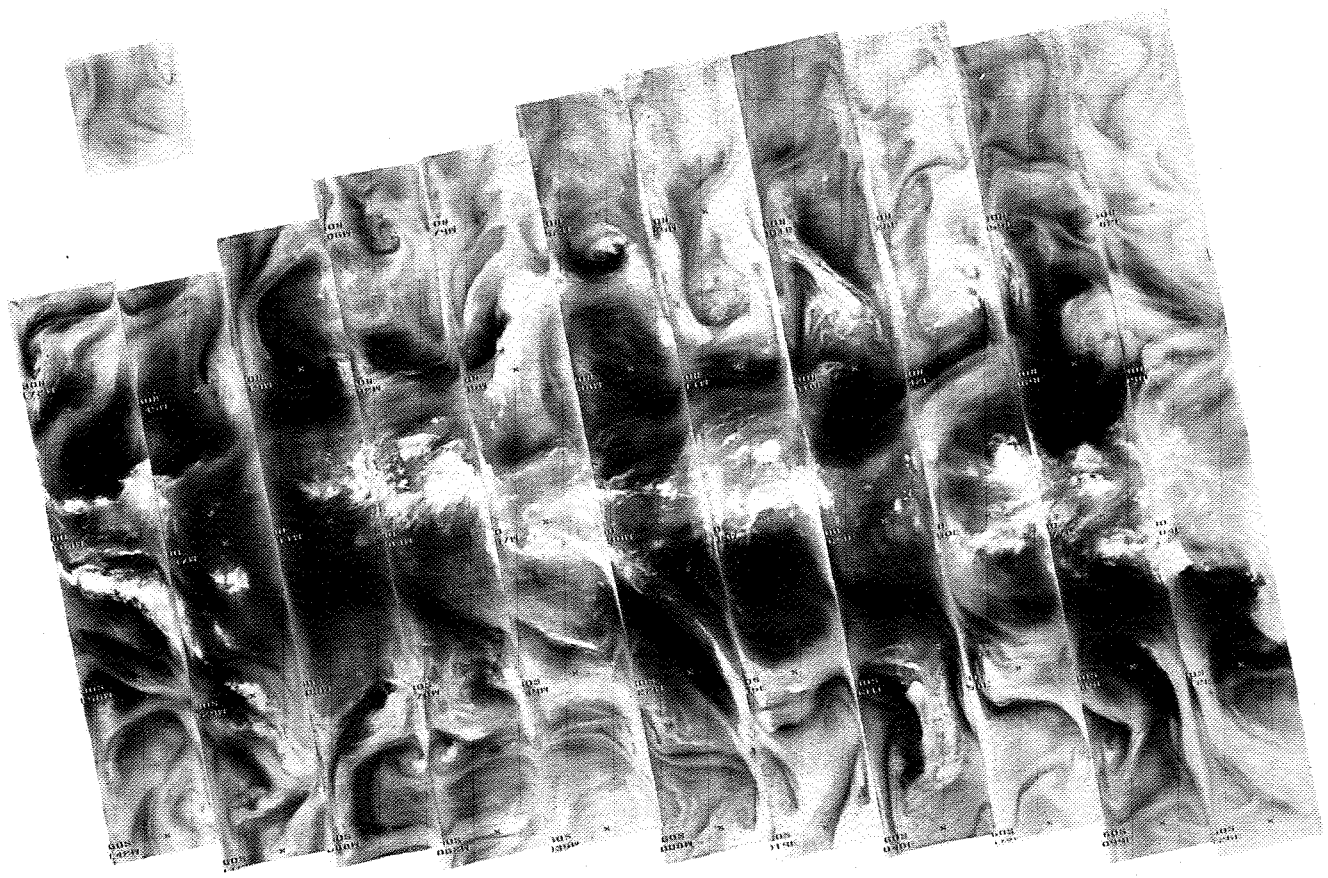

2090 2089 2088 2087 2086 2085 2084 2083 2082 2081 2080 2079 2078 2077
15 MAY 1973
11.5 μm
min.
min.


2090
2089
2088
2087
2086
2085
2084
2083
2082
2081
2080
2079
2078
2077
15 MAY 1973
6.7 μm
min.
min.

2091
2092
2093
2094
2095
2096
2097
2098
2099
2100
2101
2102
2103
16 MAY 1973
11.5 μm
min.


2103
2102
2101
2100
2099
2098
2097
2096
2095
2094
2093
2092
2091
16 MAY 1973
6.7 μm
min.
min.

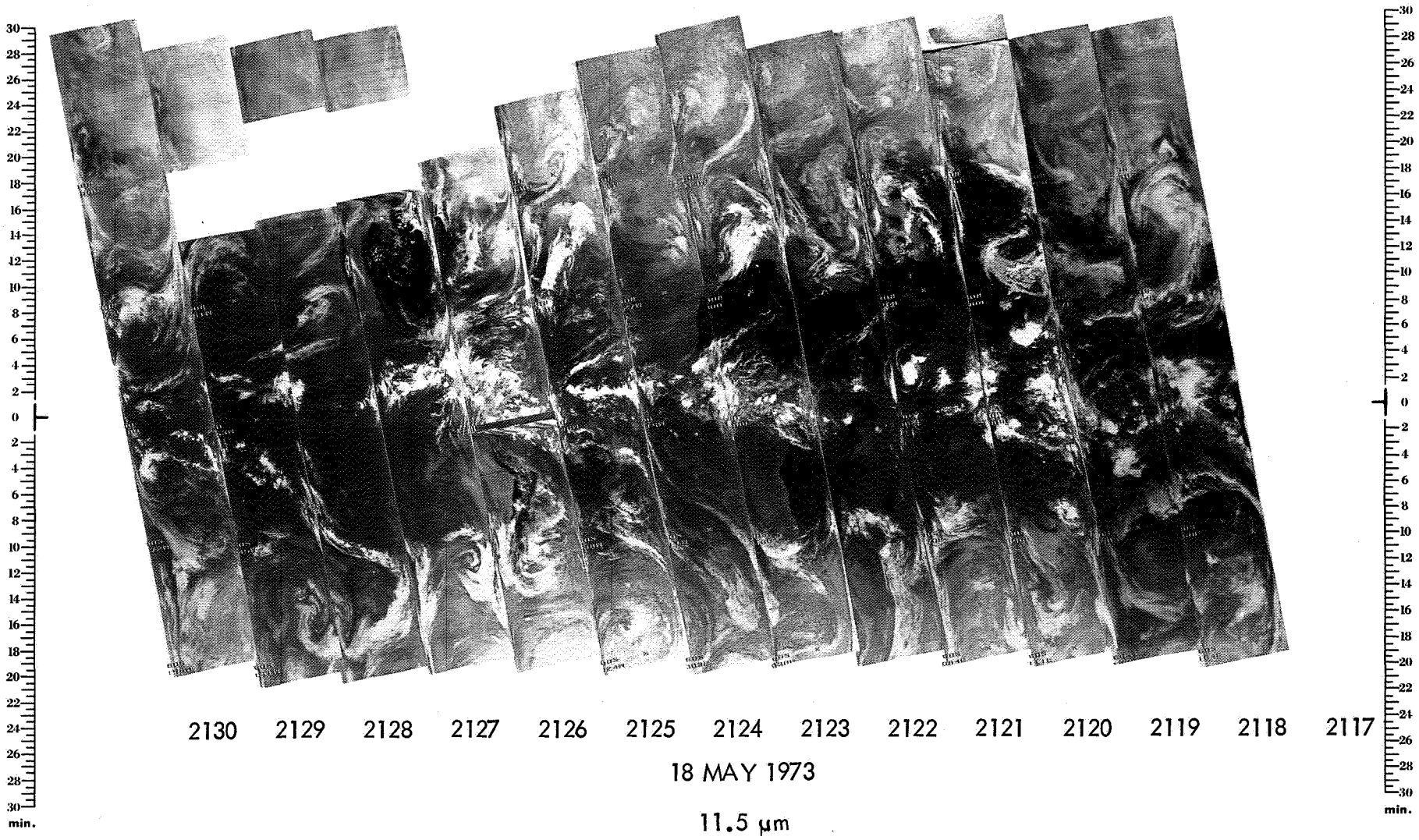

2116 2115 2114 2113 2112 2111 2110 2109 2108 2107 2106 2105 2104
17 MAY 1973
11.5 μm
min.
min.

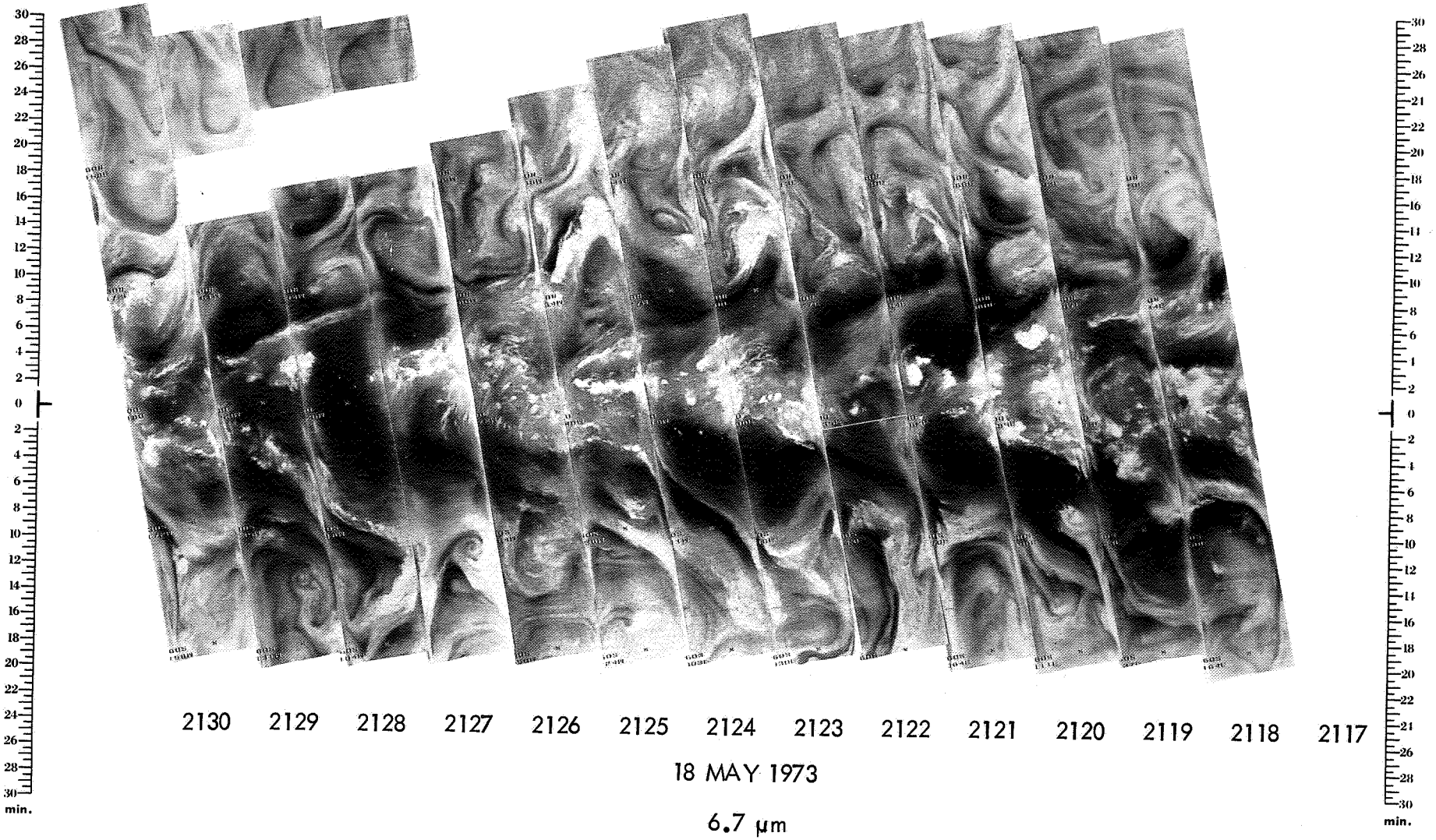


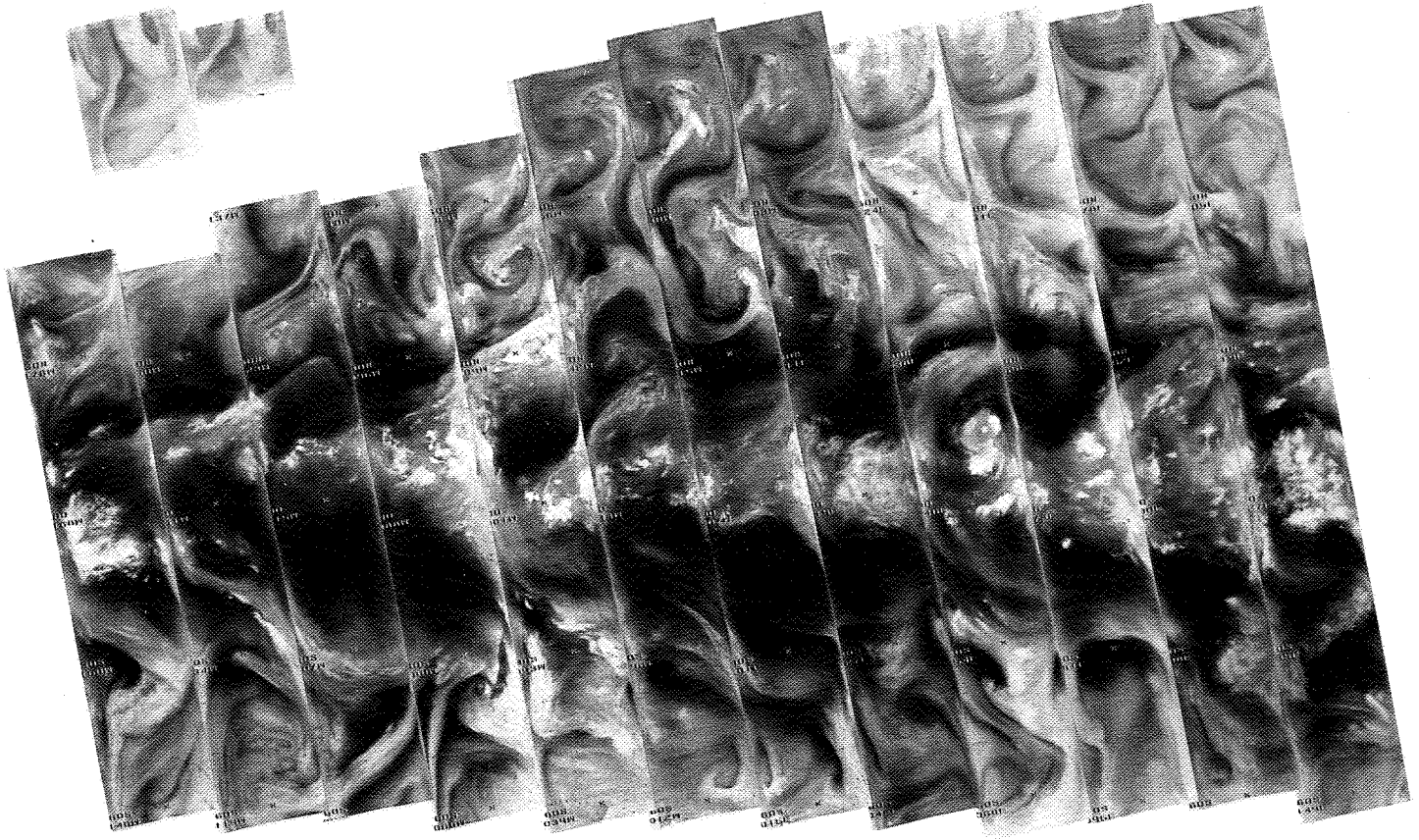
2116 2115 2114 2113 2112 2111 2110 2109 2108 2107 2106 2105 2104

17 MAY 1973

6.7 μm


2130 2129 2128 2127 2126 2125 2124 2123 2122 2121 2120 2119 2118 2117
18 MAY 1973
11.5 μm
min.
min.


2130
2129
2128
2127
2126
2125
2124
2123
2122
2121
2120
2119
2118
2117
18 MAY 1973
6.7 μm
min.
min.



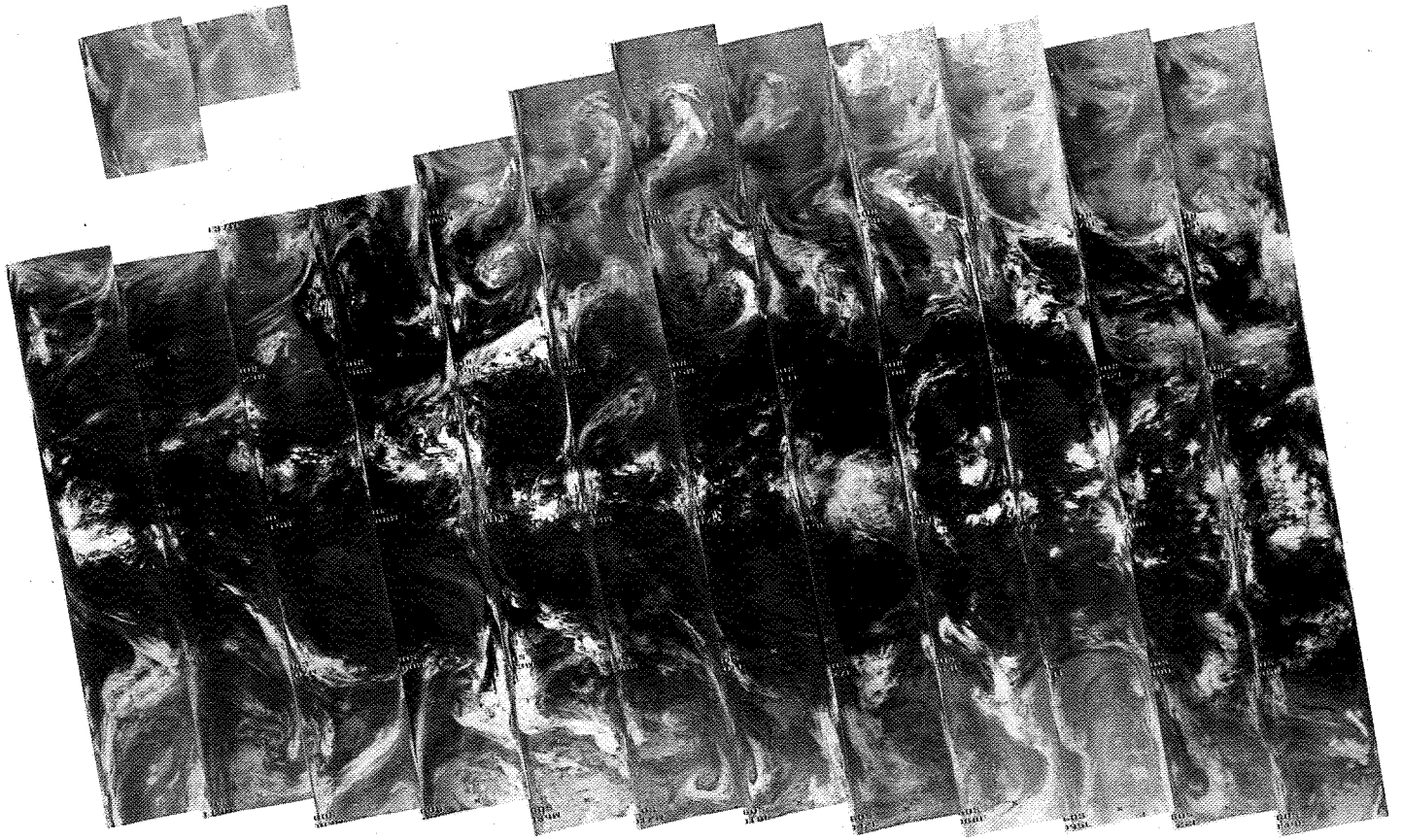
2143 2142 2141 2140 2139 2138 2137 2136 2135 2134 2133 2132 2131

19 MAY 1973

6.7 μm

min.

min.



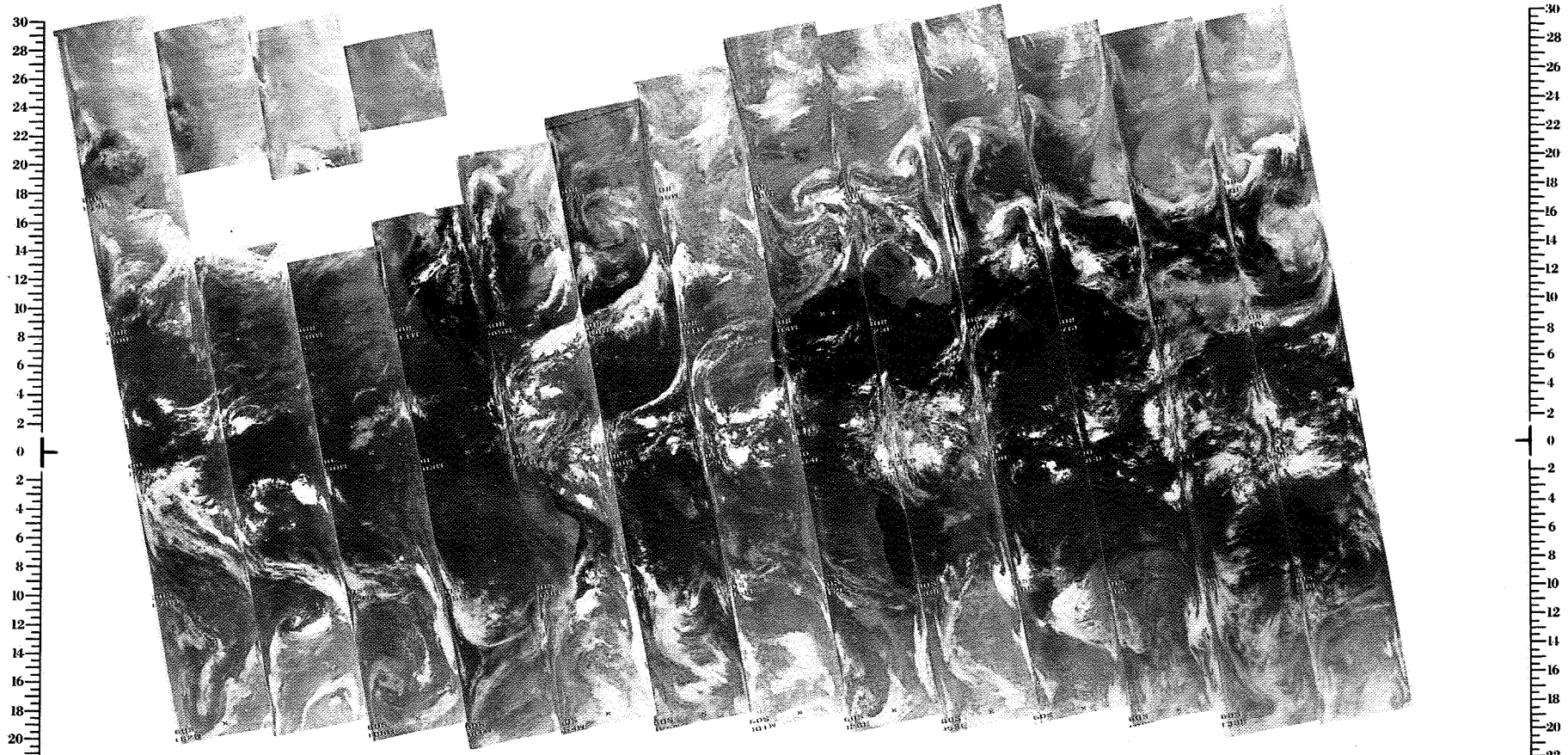
2143 2142 2141 2140 2139 2138 2137 2136 2135 2134 2133 2132 2131

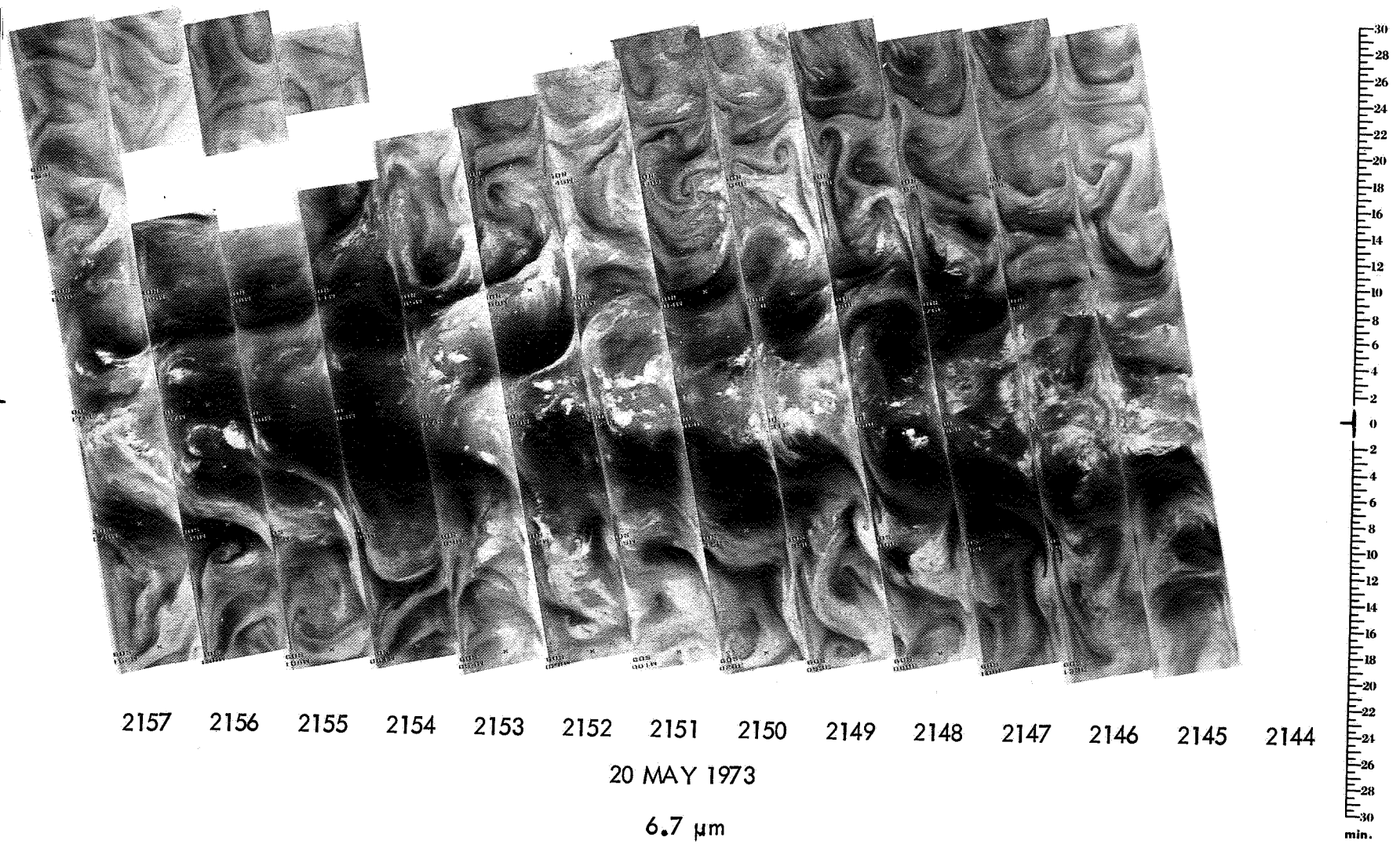
19 MAY 1973

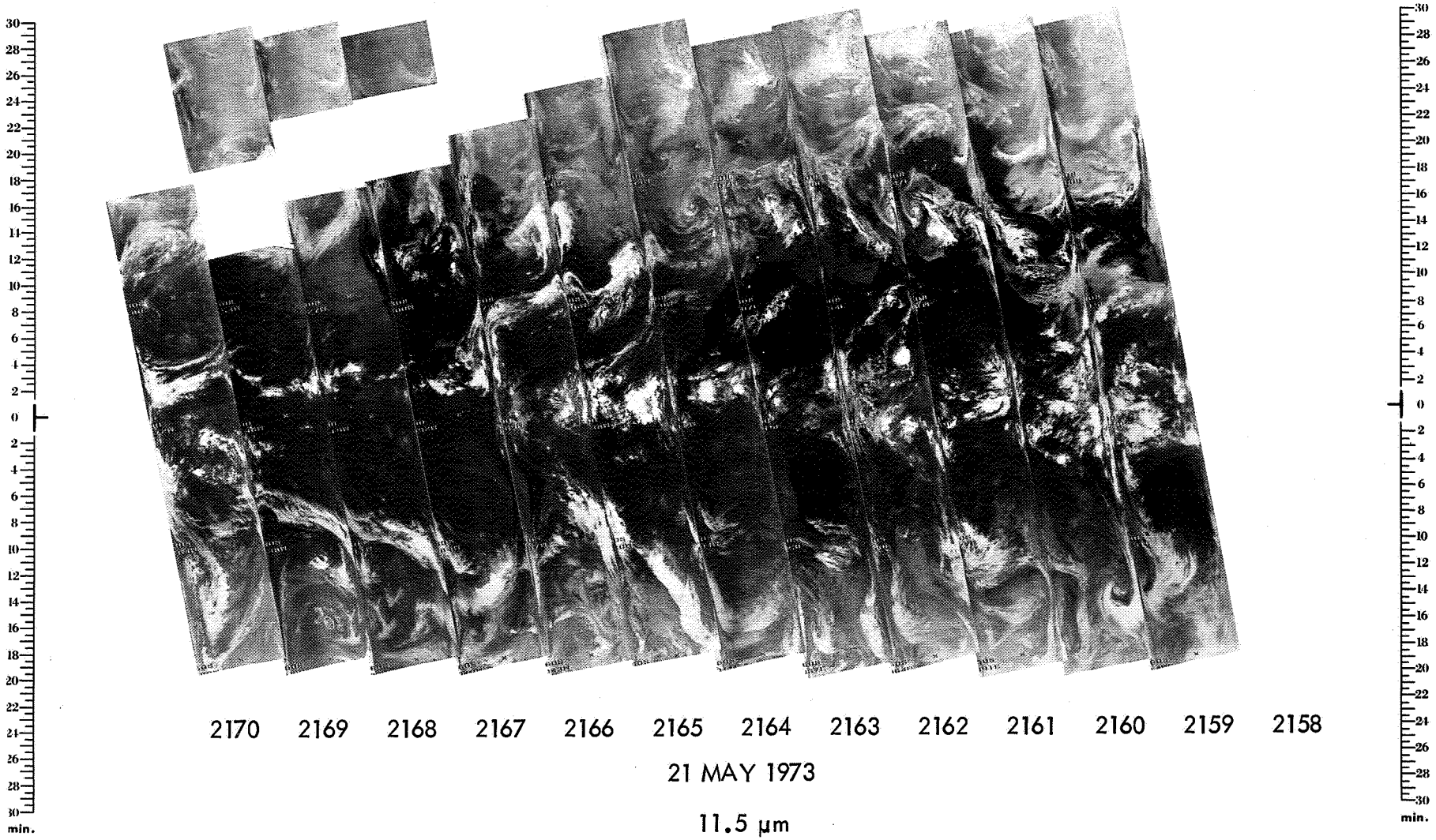
11.5 μm

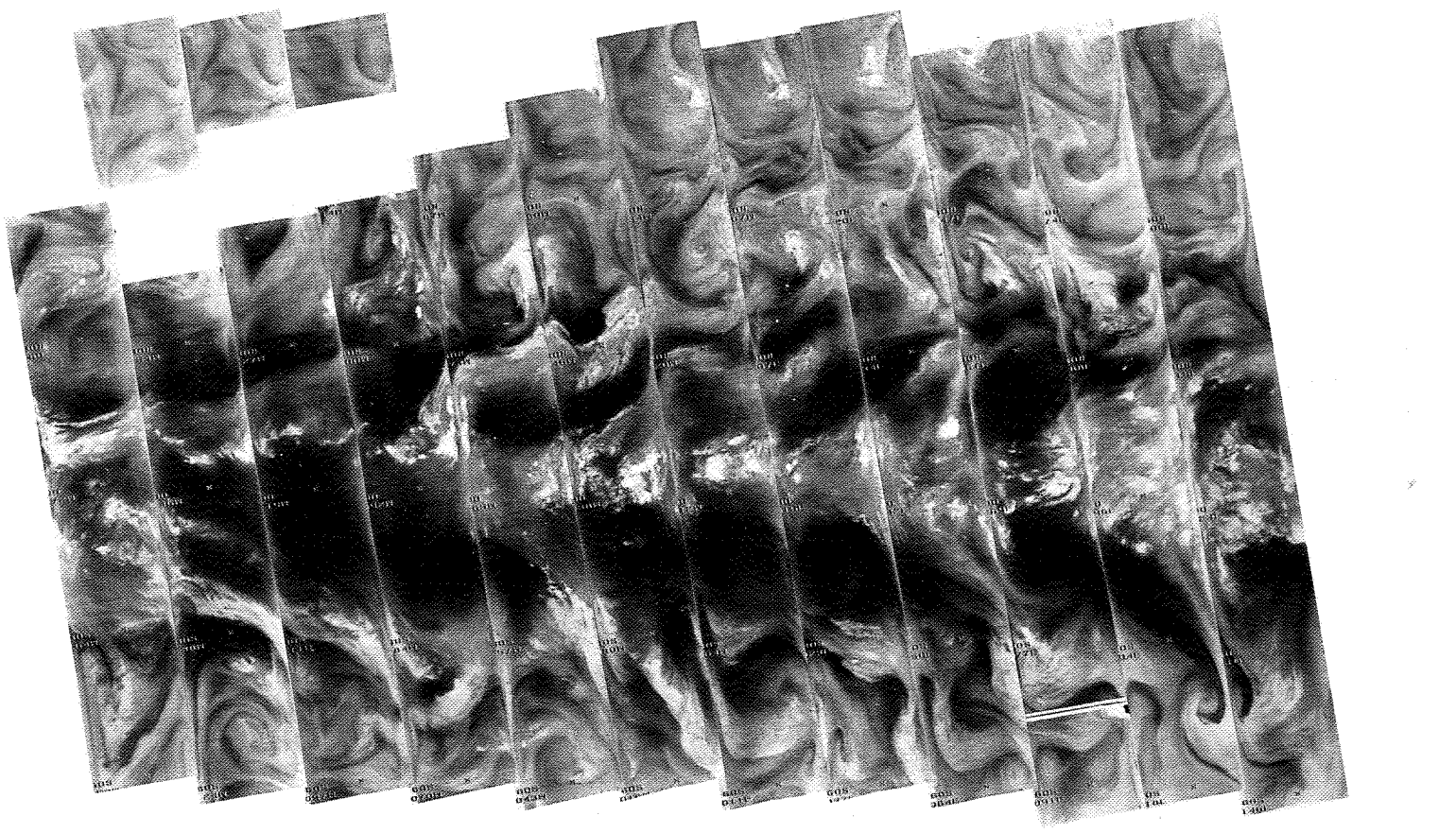
min.

min.


2157
2156
2155
2154
2153
2152
2151
2150
2149
2148
2147
2146
2145
2144
20 MAY 1973
11.5 μm
min.
min.


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
2157 2156 2155 2154 2153 2152 2151 2150 2149 2148 2147 2146 2145 2144
20 MAY 1973
6.7 μm


2170 2169 2168 2167 2166 2165 2164 2163 2162 2161 2160 2159 2158
21 MAY 1973
11.5 μm
min.
min.

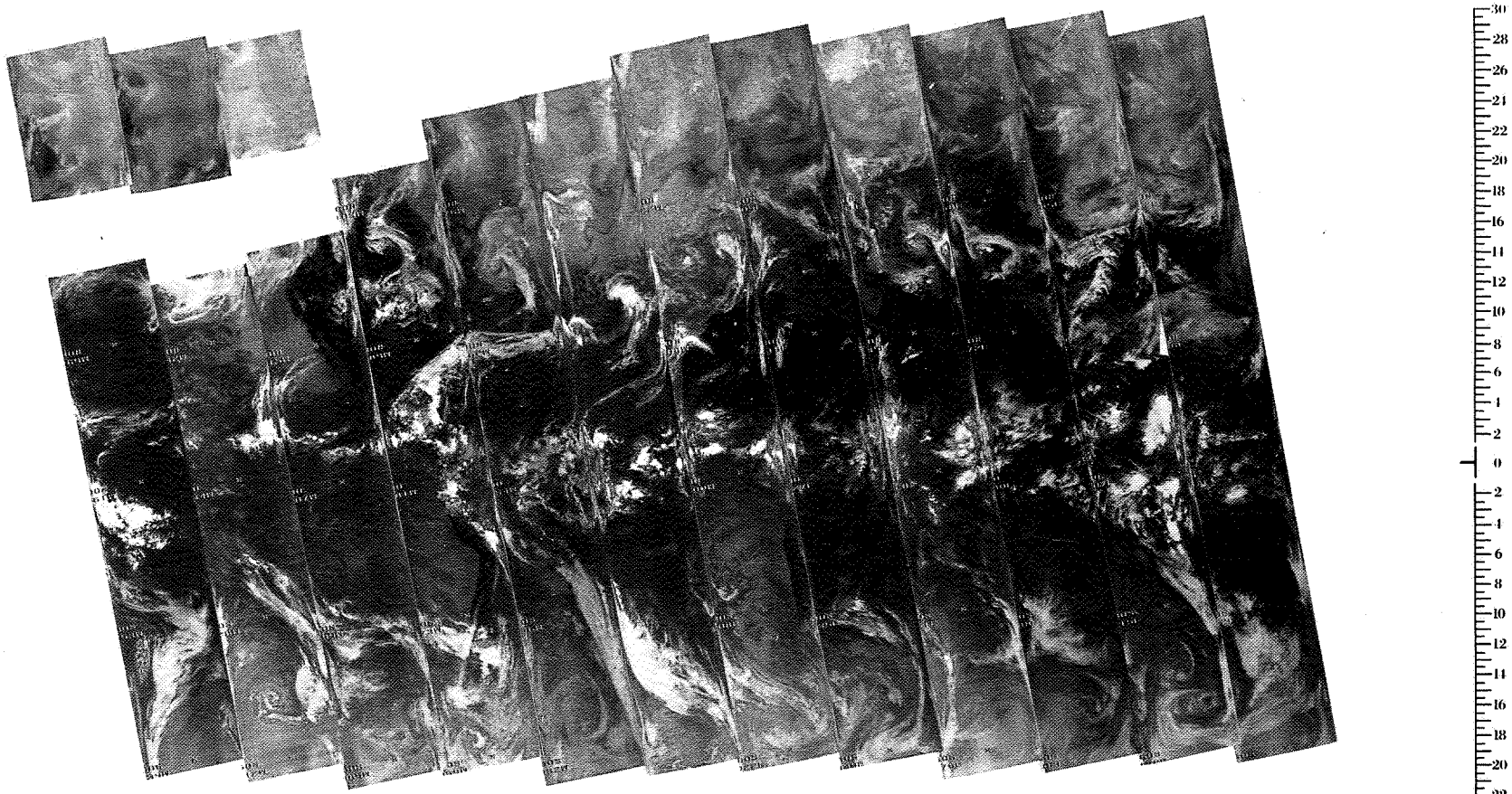


2170 2169 2168 2167 2166 2165 2164 2163 2162 2161 2160 2159 2158

21 MAY 1973

6.7 μm

min.

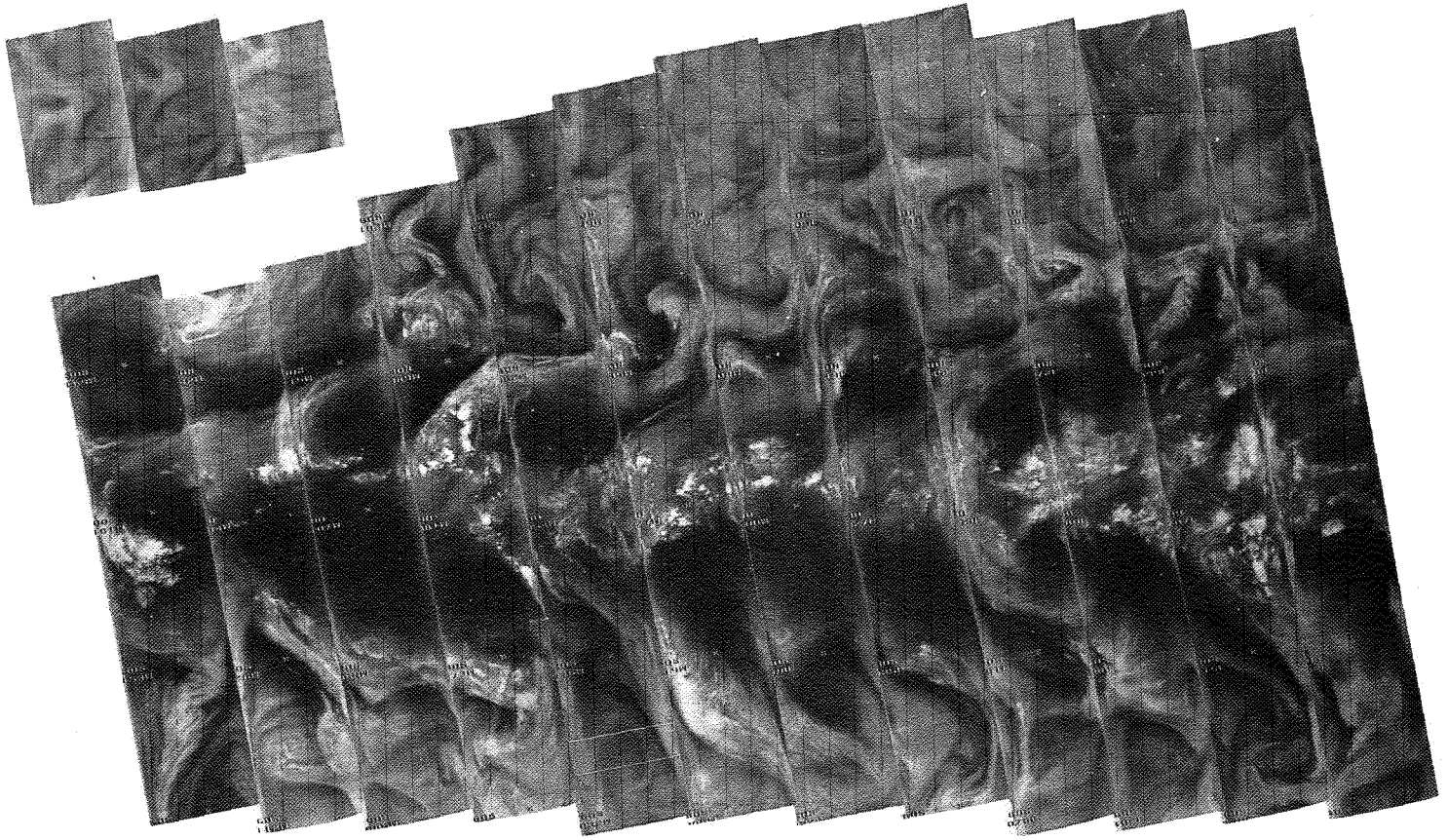


2183 2182 2181 2180 2179 2178 2177 2176 2175 2174 2173 2172 2171

22 MAY 1973

11.5 μm

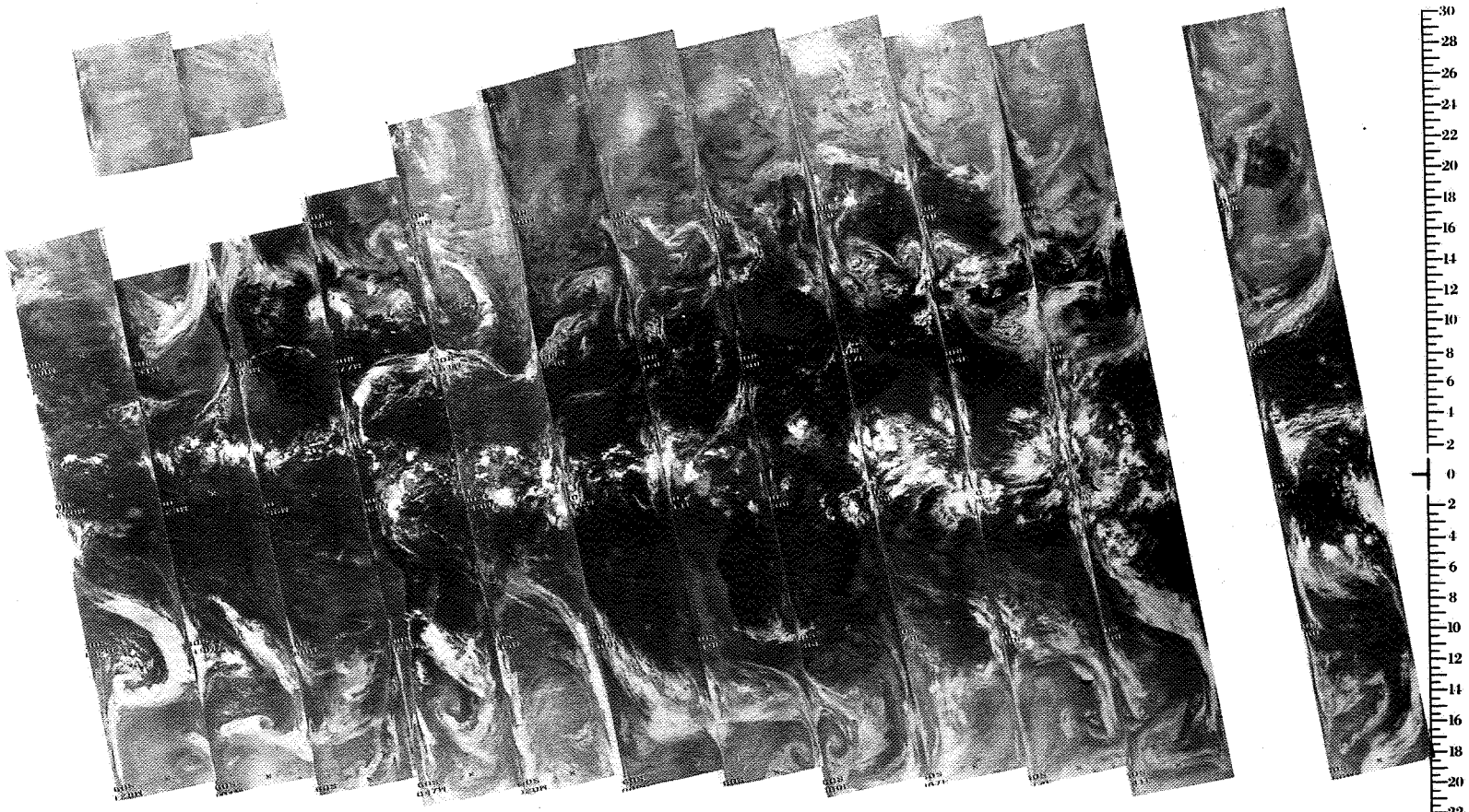
min.

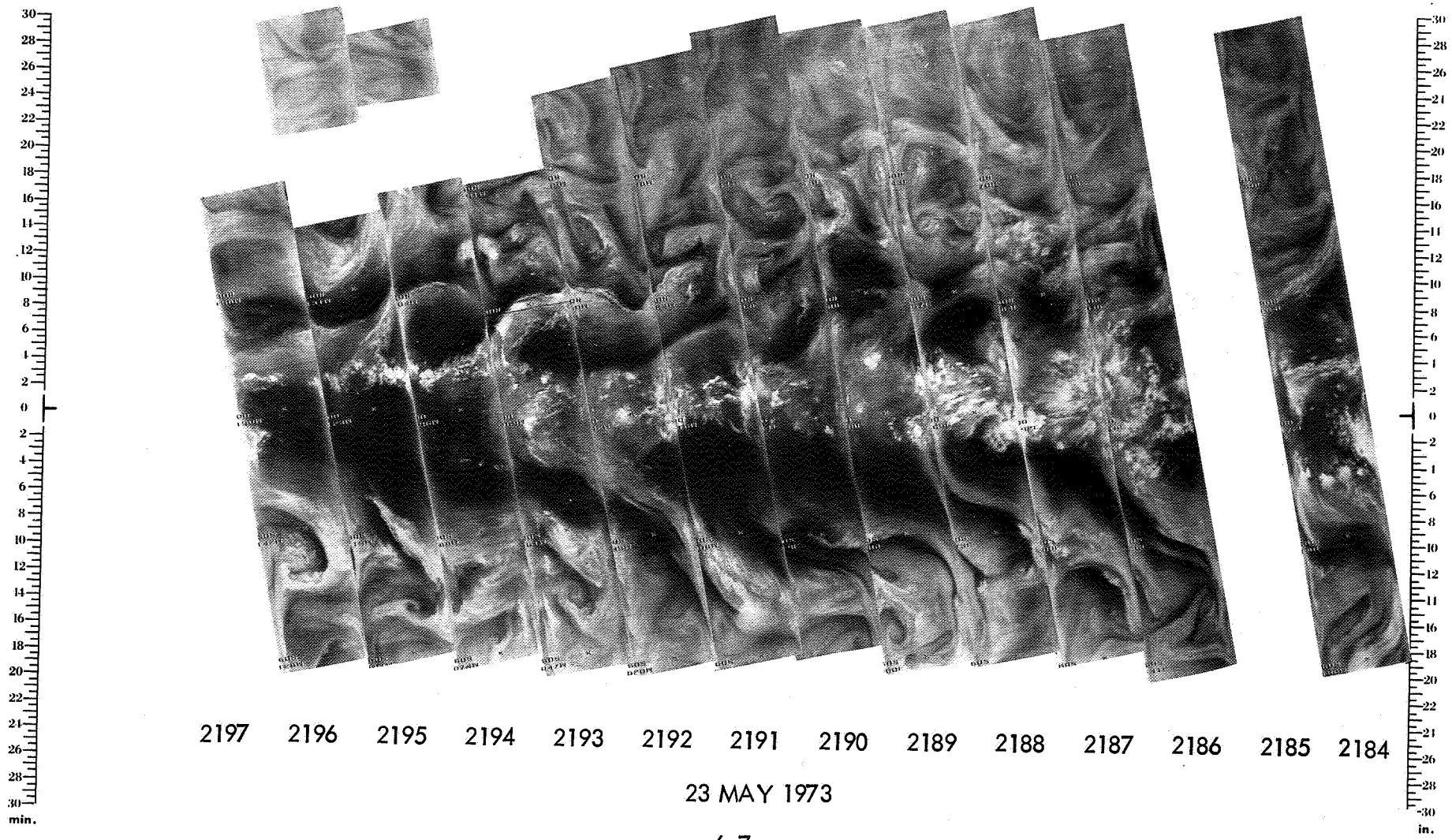


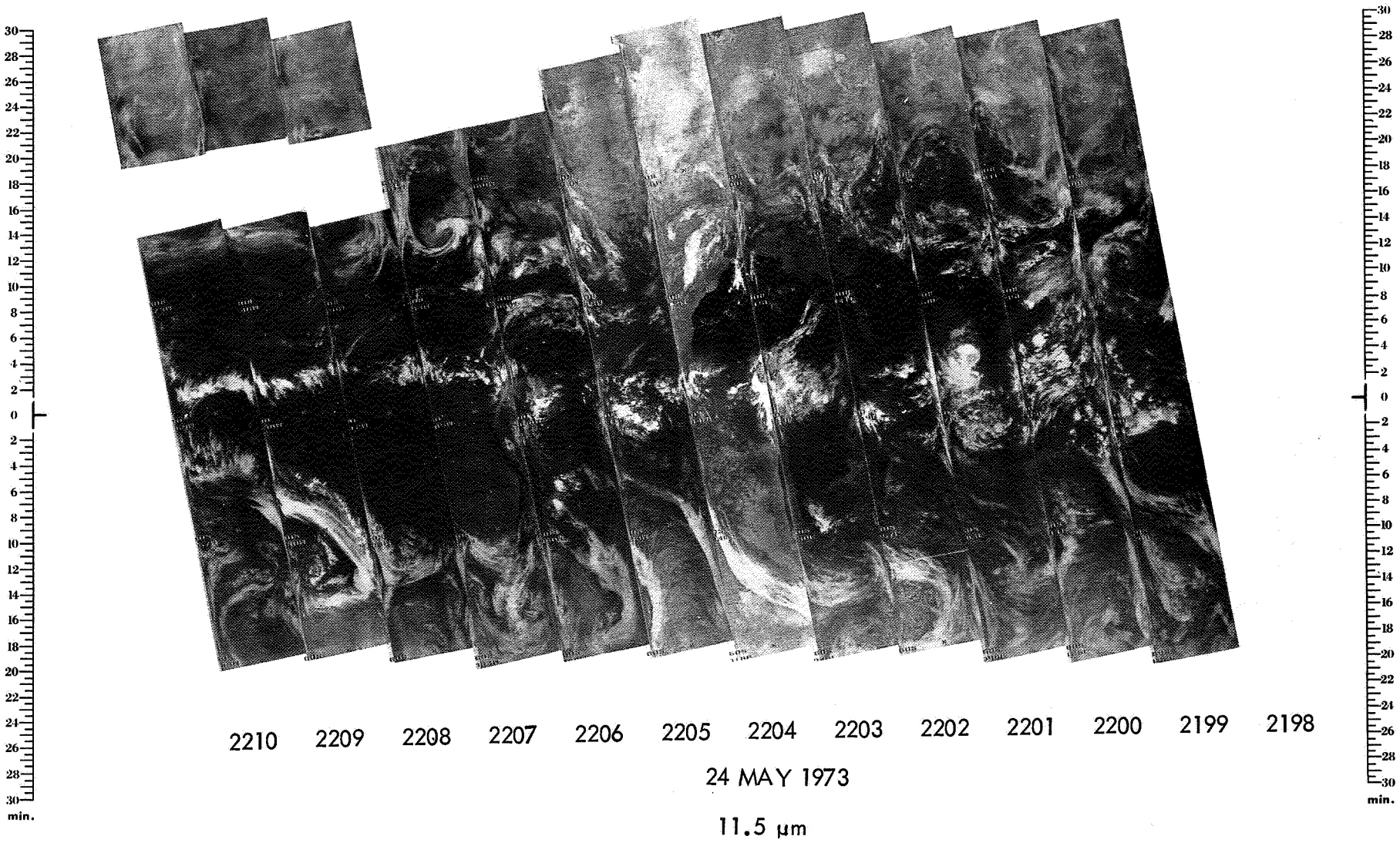
2183 2182 2181 2180 2179 2178 2177 2176 2175 2174 2173 2172 2171

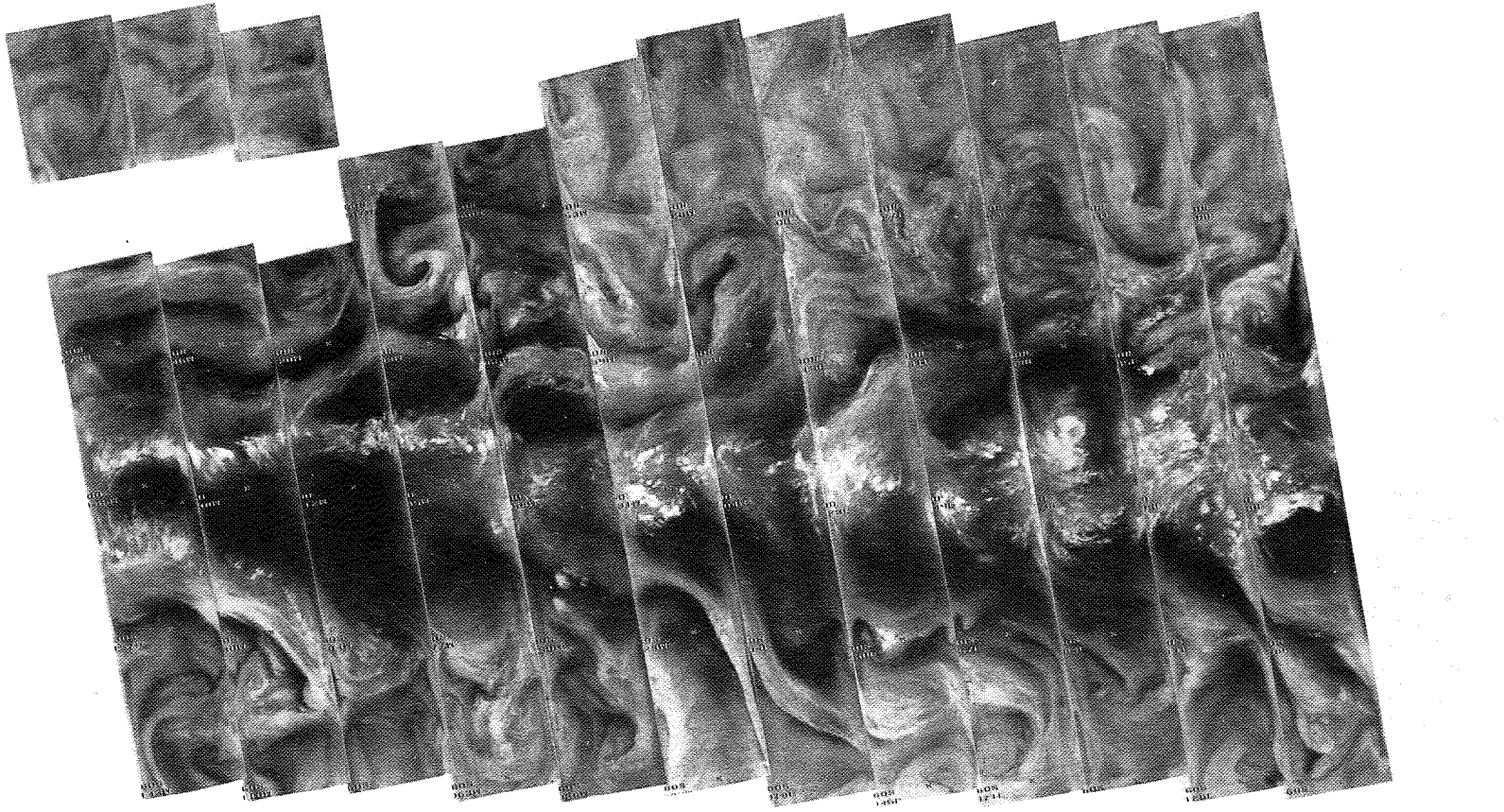
22 MAY 1973

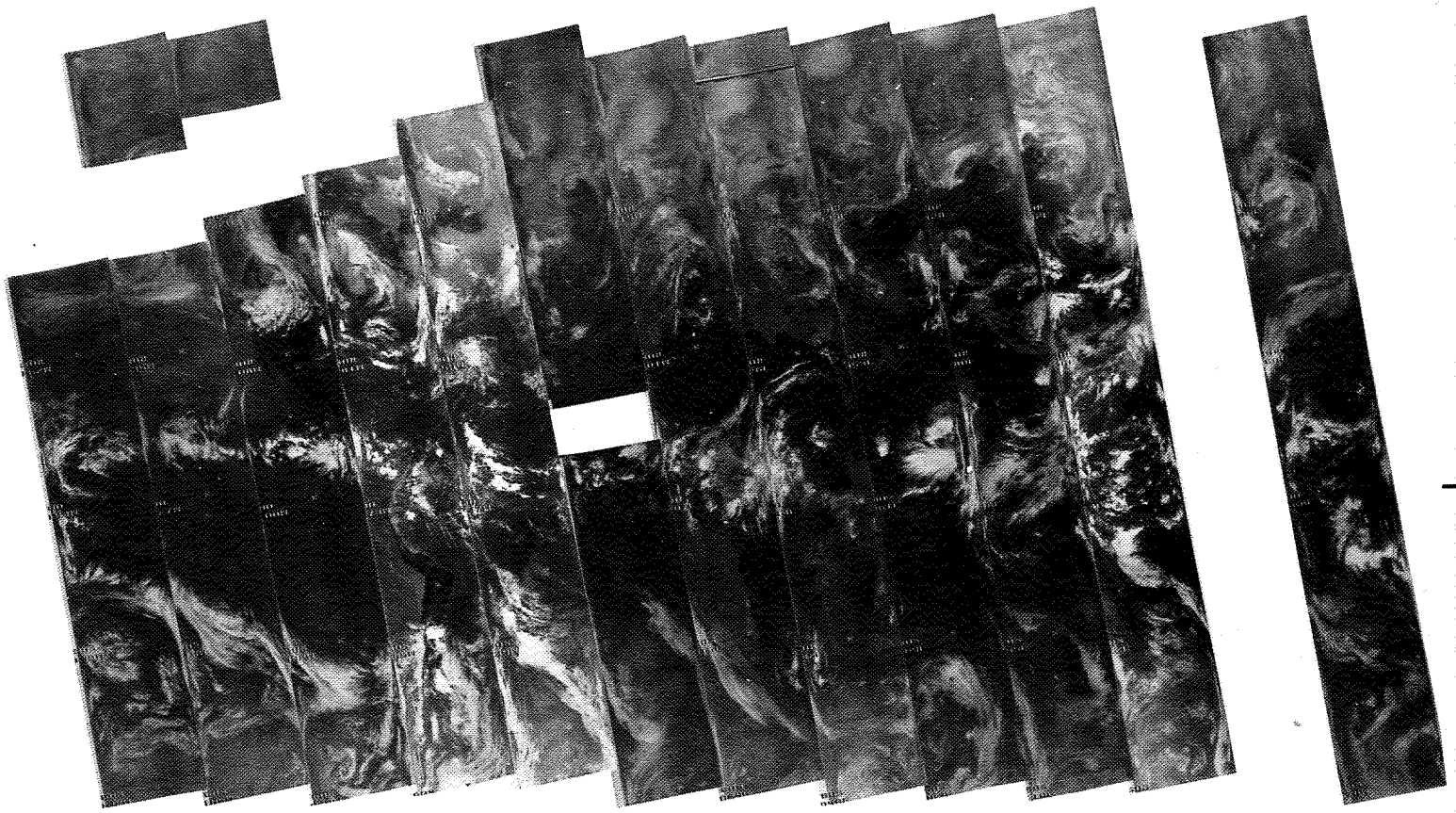
6.7 μm

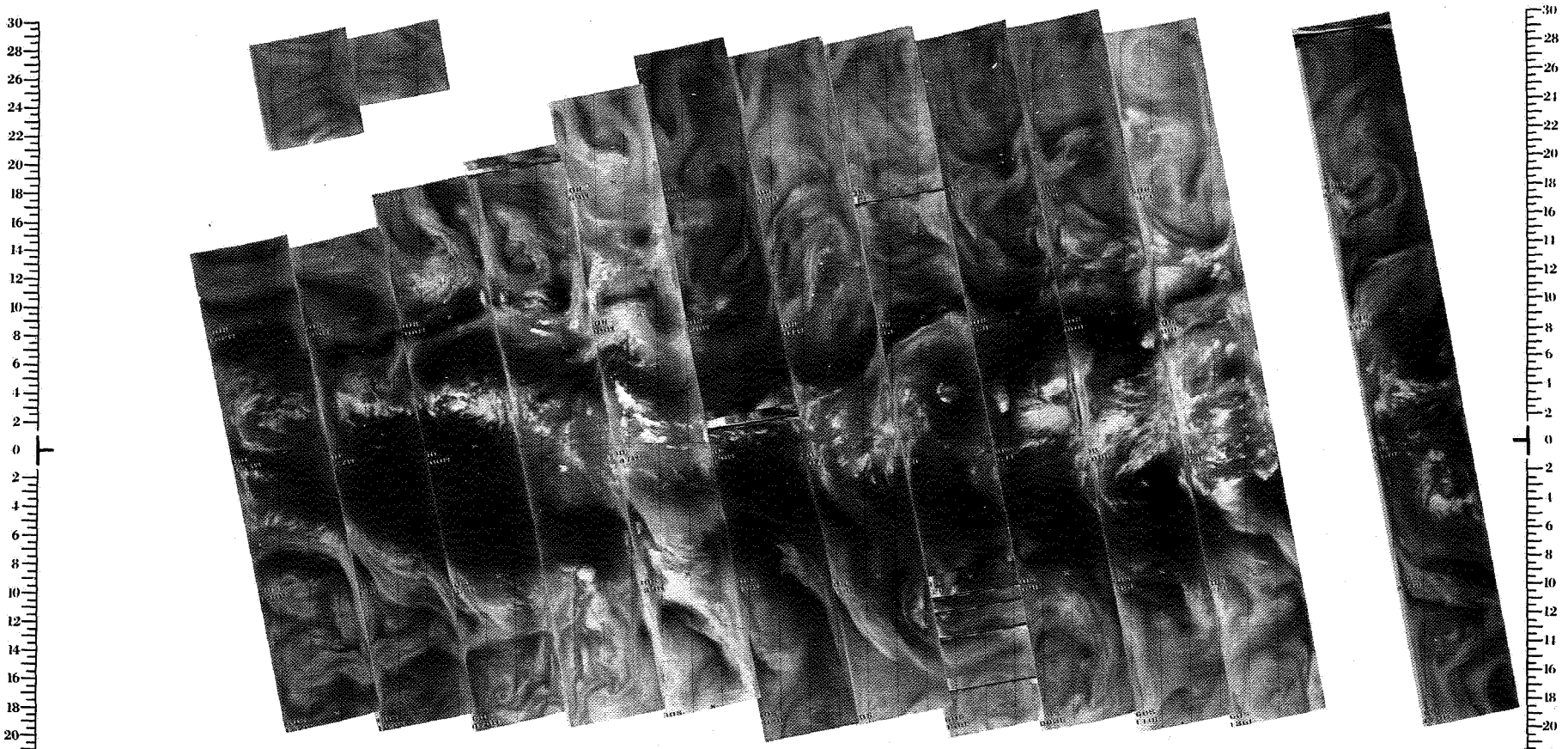

2197
2196
2195
2194
2193
2192
2191
2190
2189
2188
2187
2186
2185
2184
23 MAY 1973
11.5 μm
min.
in.

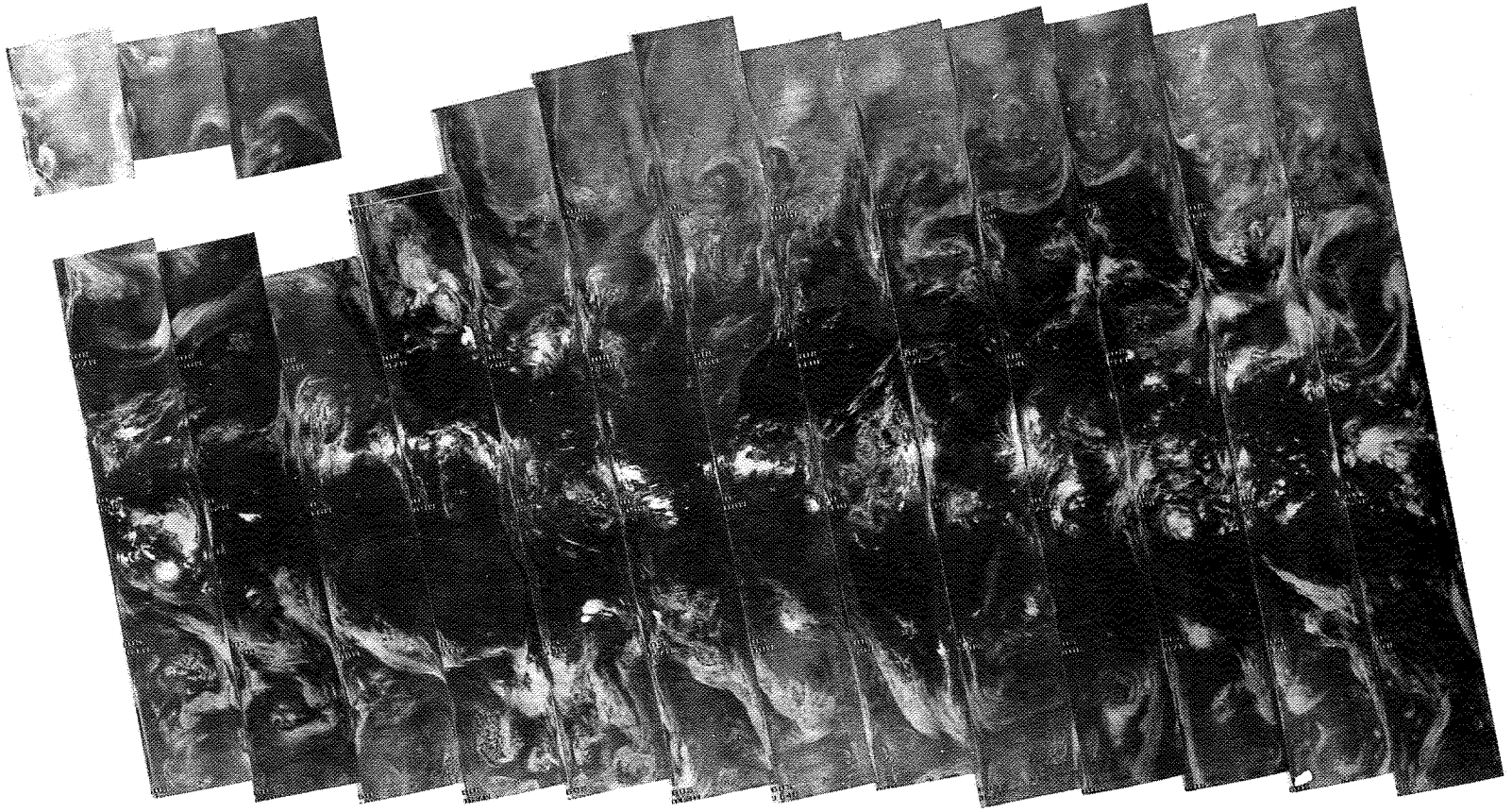

2197 2196 2195 2194 2193 2192 2191 2190 2189 2188 2187 2186 2185 2184
23 MAY 1973
6.7 μm
min.
in.


2210 2209 2208 2207 2206 2205 2204 2203 2202 2201 2200 2199 2198
24 MAY 1973
11.5 μm
min.
min.


2210
2209
2208
2207
2206
2205
2204
2203
2202
2201
2200
2199
2198
24 MAY 1973
6.7 um
min.
min.


2224
2223
2222
2221
2220
2219
2218
2217
2216
2215
2214
2213
2212
2211
25 MAY 1973
11.5 μm
min.
in.

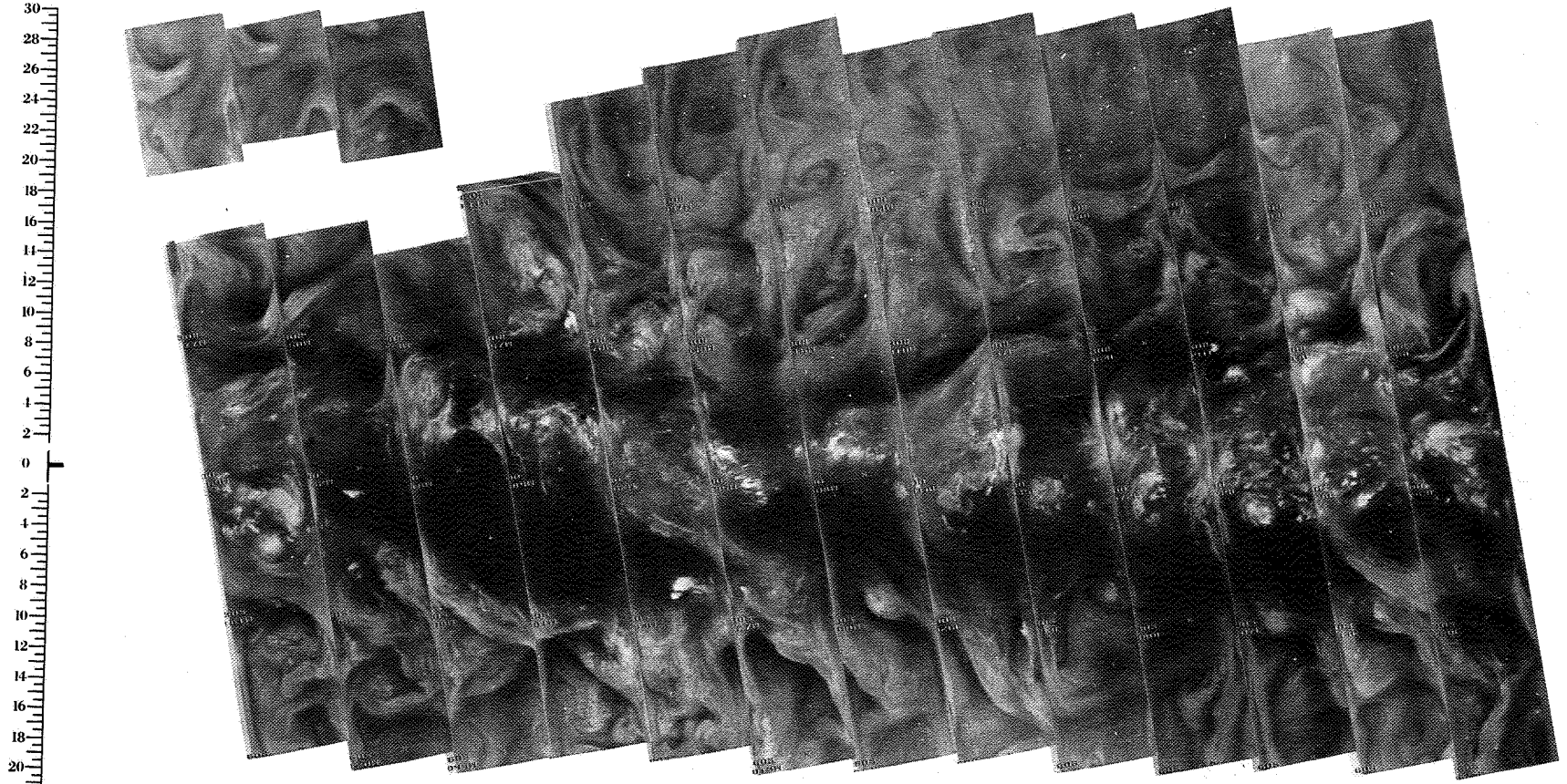

2224
2223
2222
2221
2220
2219
2218
2217
2216
2215
2214
2213
2212
2211
25 MAY 1973
6.7 μm
min.
in.

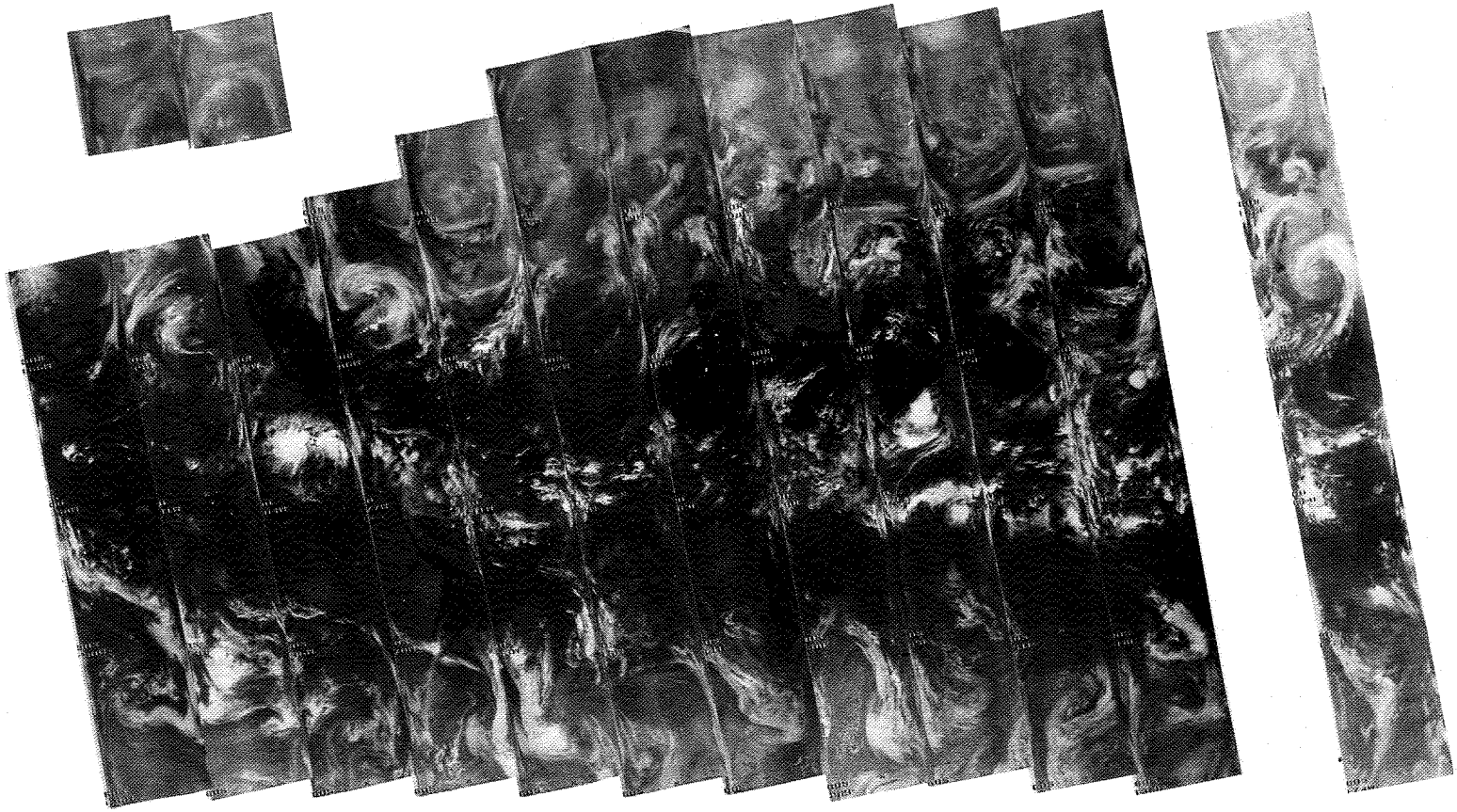


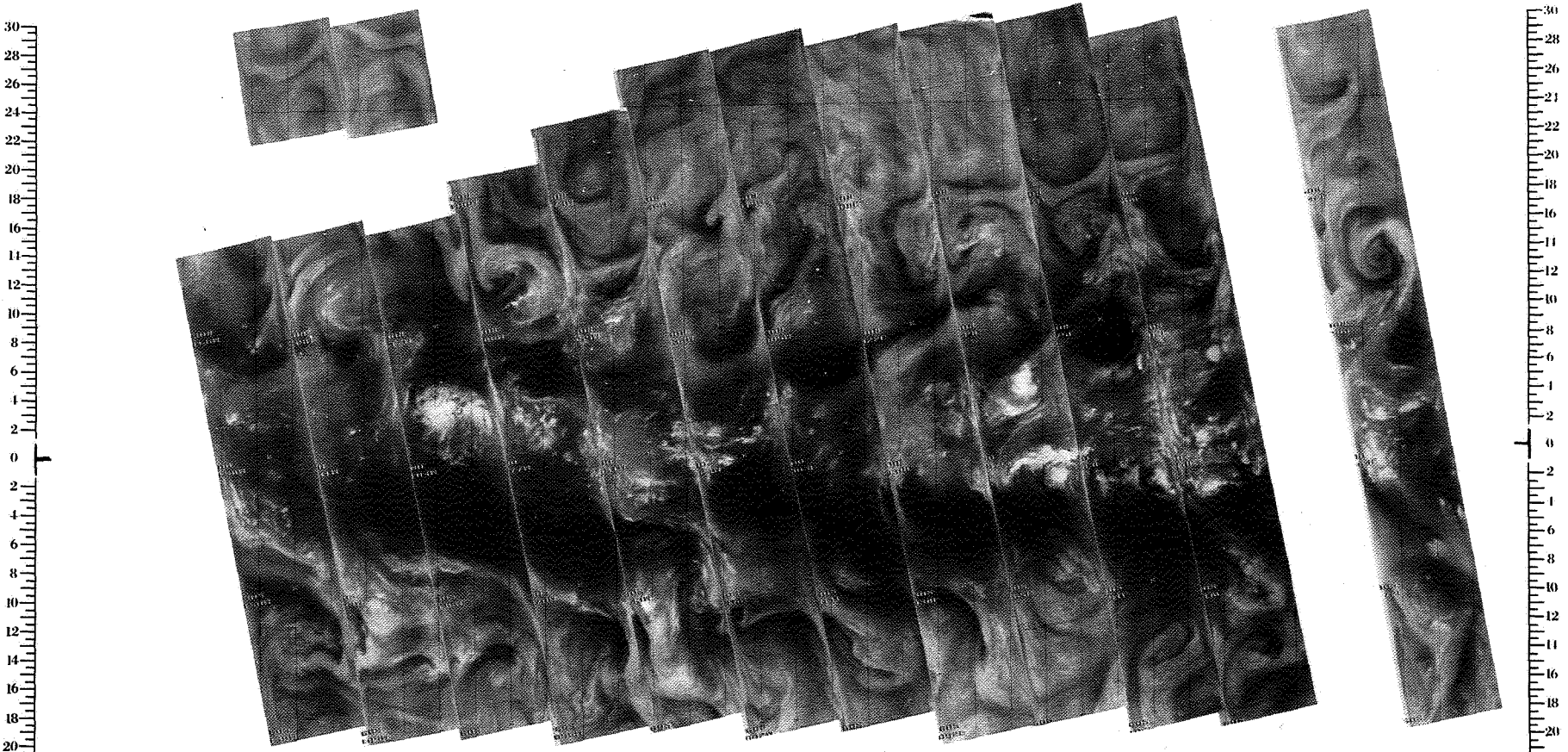
2237 2236 2235 2234 2233 2232 2231 2230 2229 2228 2227 2226 2225

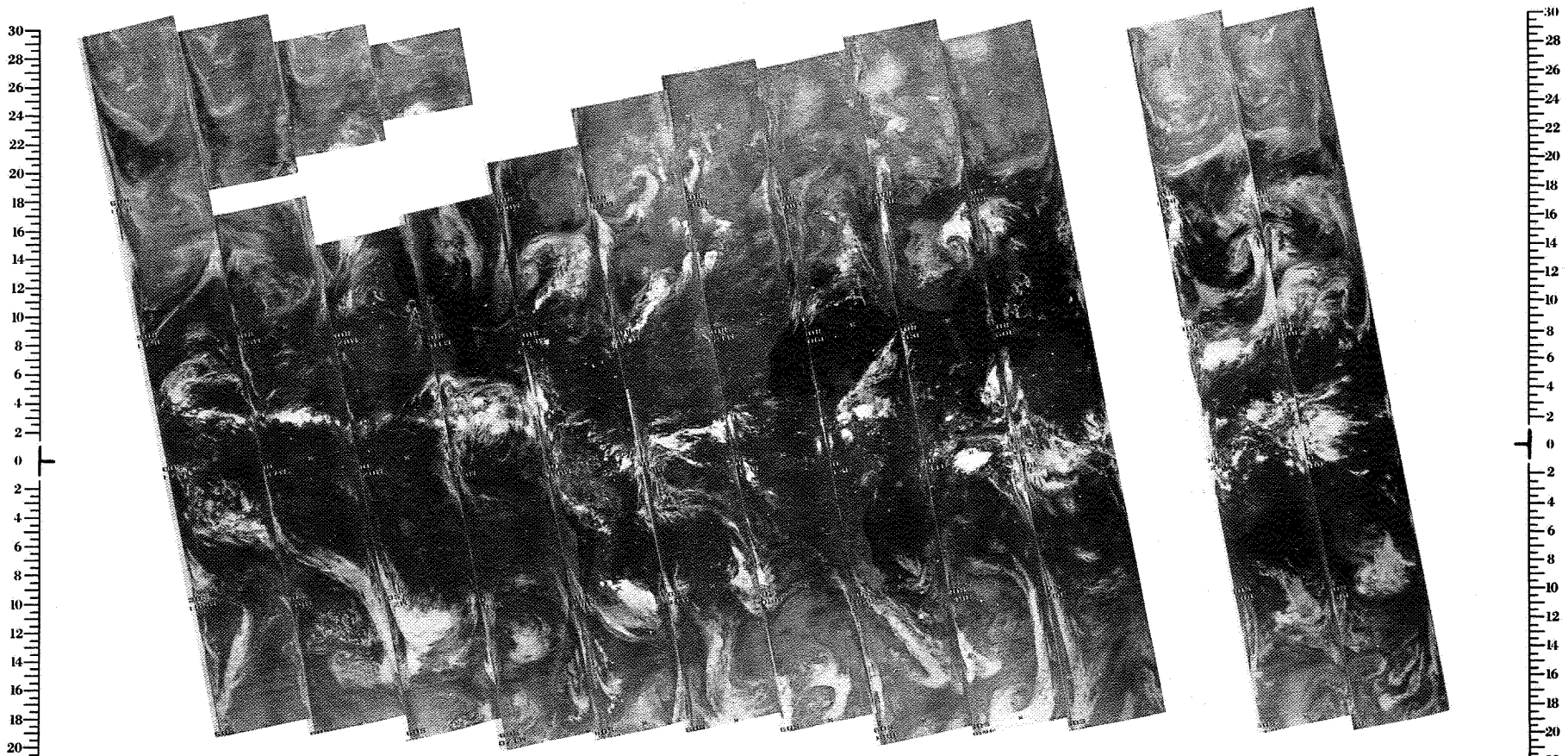
26 MAY 1973

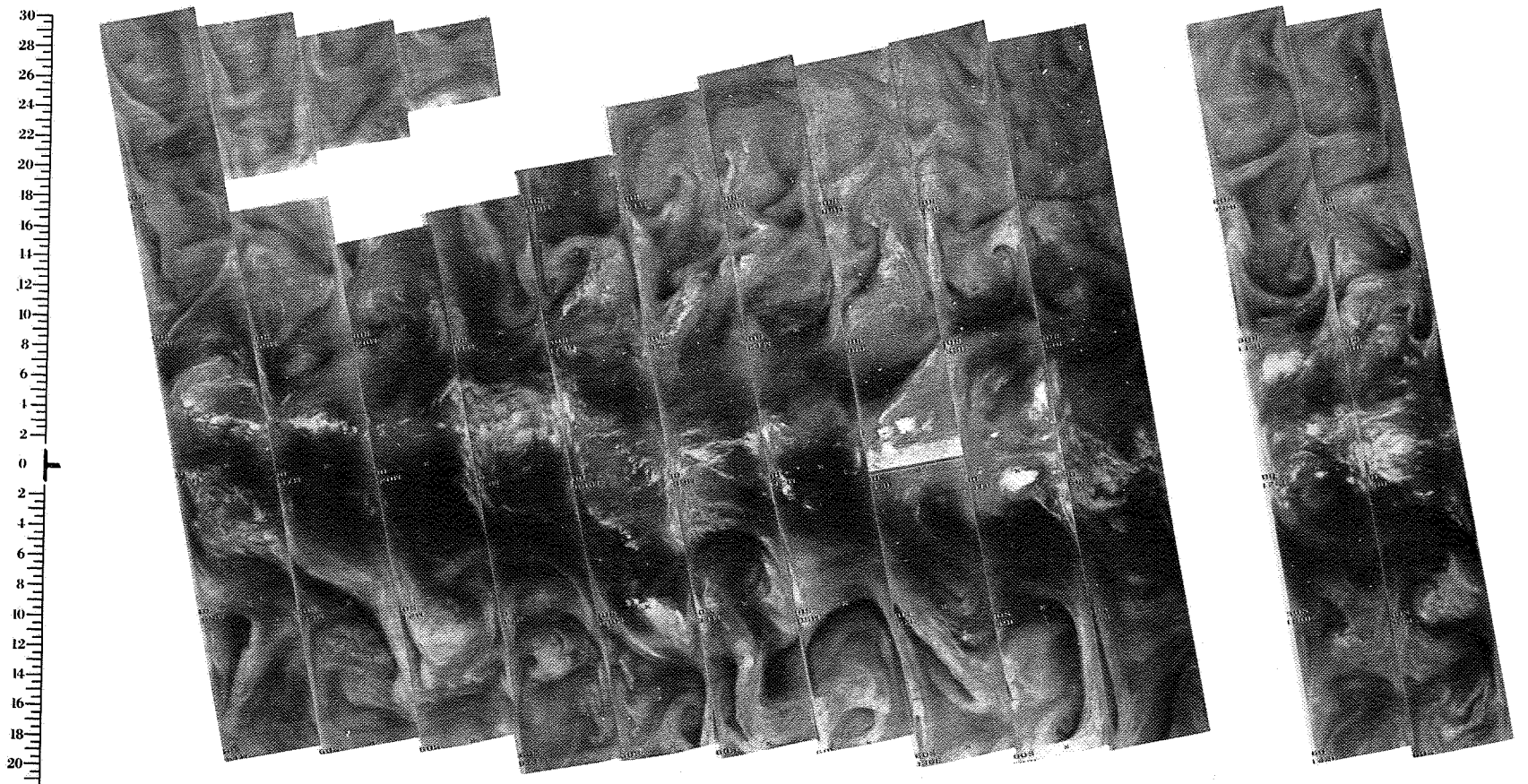
11.5 μm

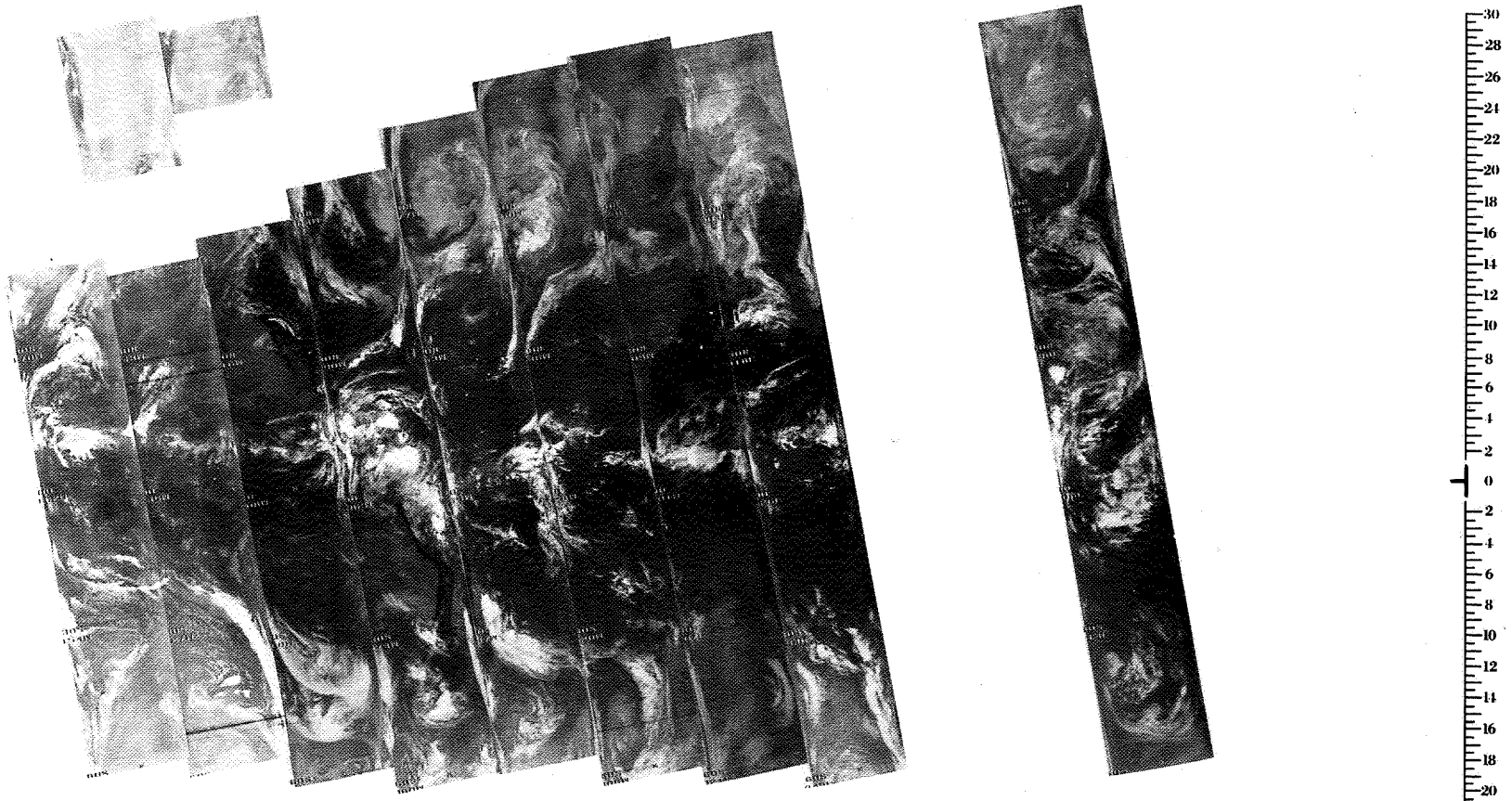

2237
2236
2235
2234
2233
2232
2231
2230
2229
2228
2227
2226
2225
26 MAY 1973
6.7 μm
min.
min.

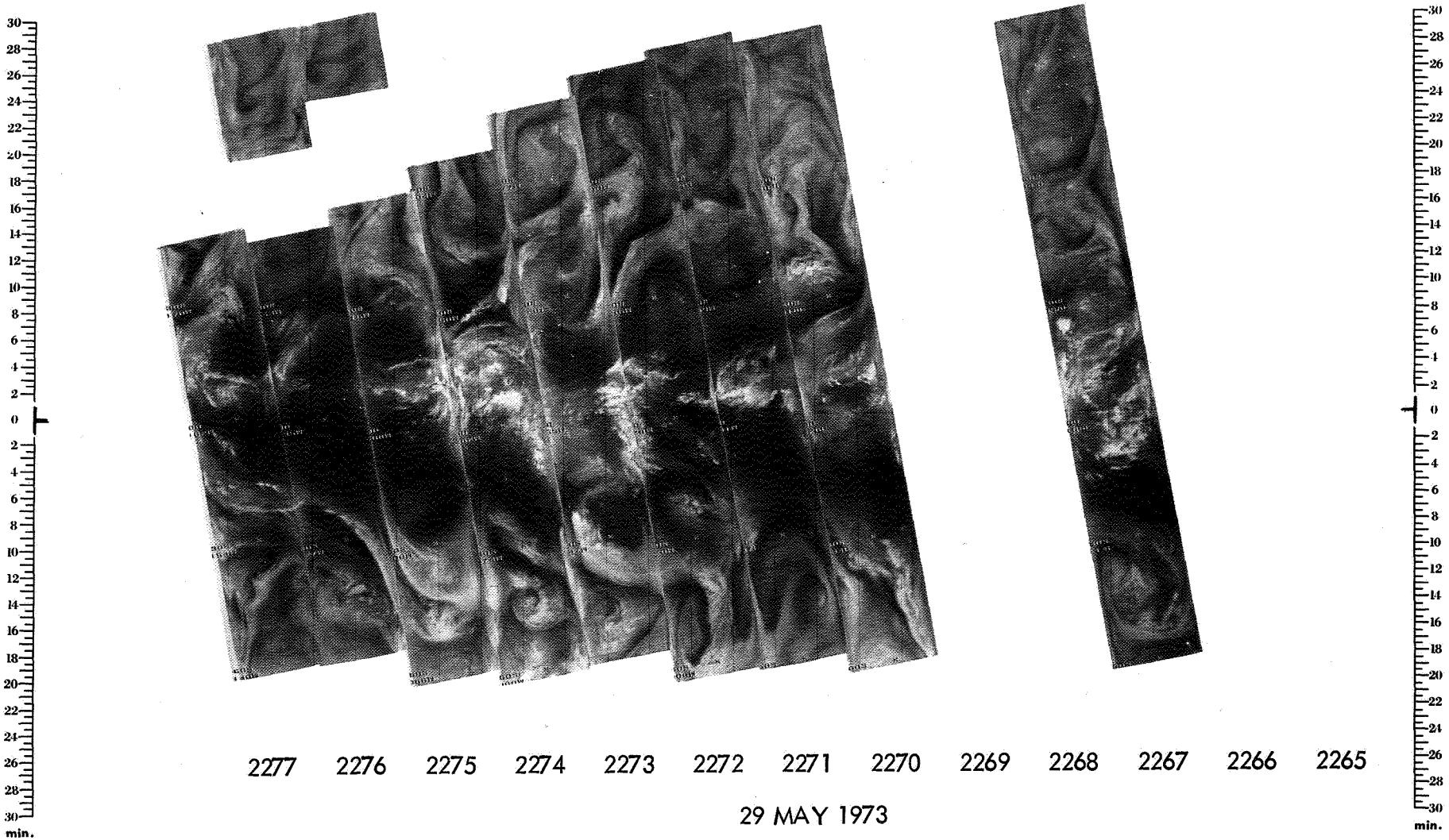

2251
2250
2249
2248
2247
2246
2245
2244
2243
2242
2241
2240
2239
2238
27 MAY 1973
11.5 μm
min.
min.

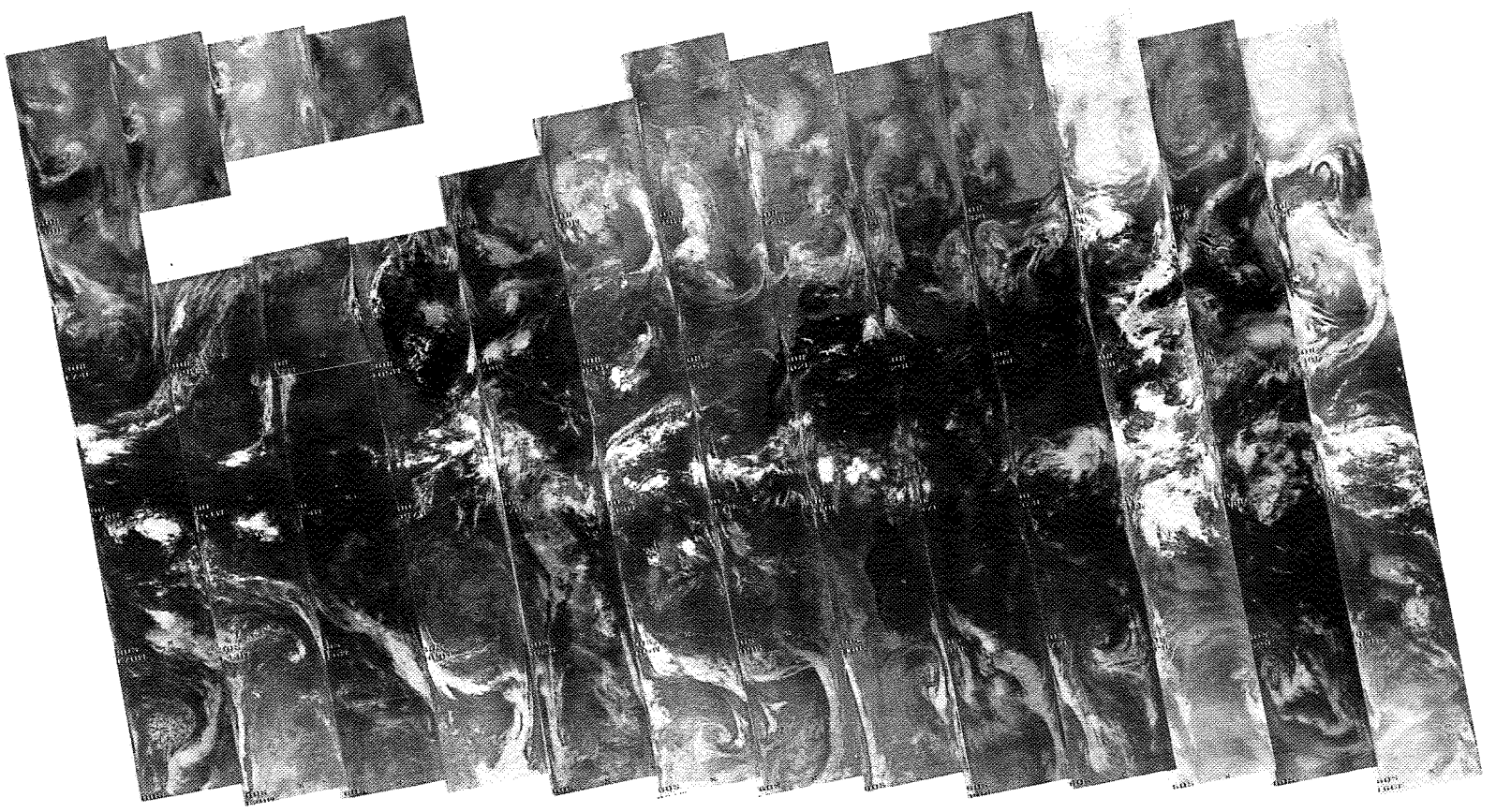

2251
2250
2249
2248
2247
2246
2245
2244
2243
2242
2241
2240
2239
2238
27 MAY 1973
6.7 μm
min.
min.


2264
2263
2262
2261
2260
2259
2258
2257
2256
2255
2254
2253
2252
28 MAY 1973
11.5 μm
min.
min.


2264 2263 2262 2261 2260 2259 2258 2257 2256 2255 2254 2253 2252
28 MAY 1973
6.7 μm
min.
min.


2277
2276
2275
2274
2273
2272
2271
2270
2269
2268
2267
2266
2265
29 MAY 1973
11.5 μm
min.
min.


2277 2276 2275 2274 2273 2272 2271 2270 2269 2268 2267 2266 2265
29 MAY 1973
6.7 µm
min.
min.



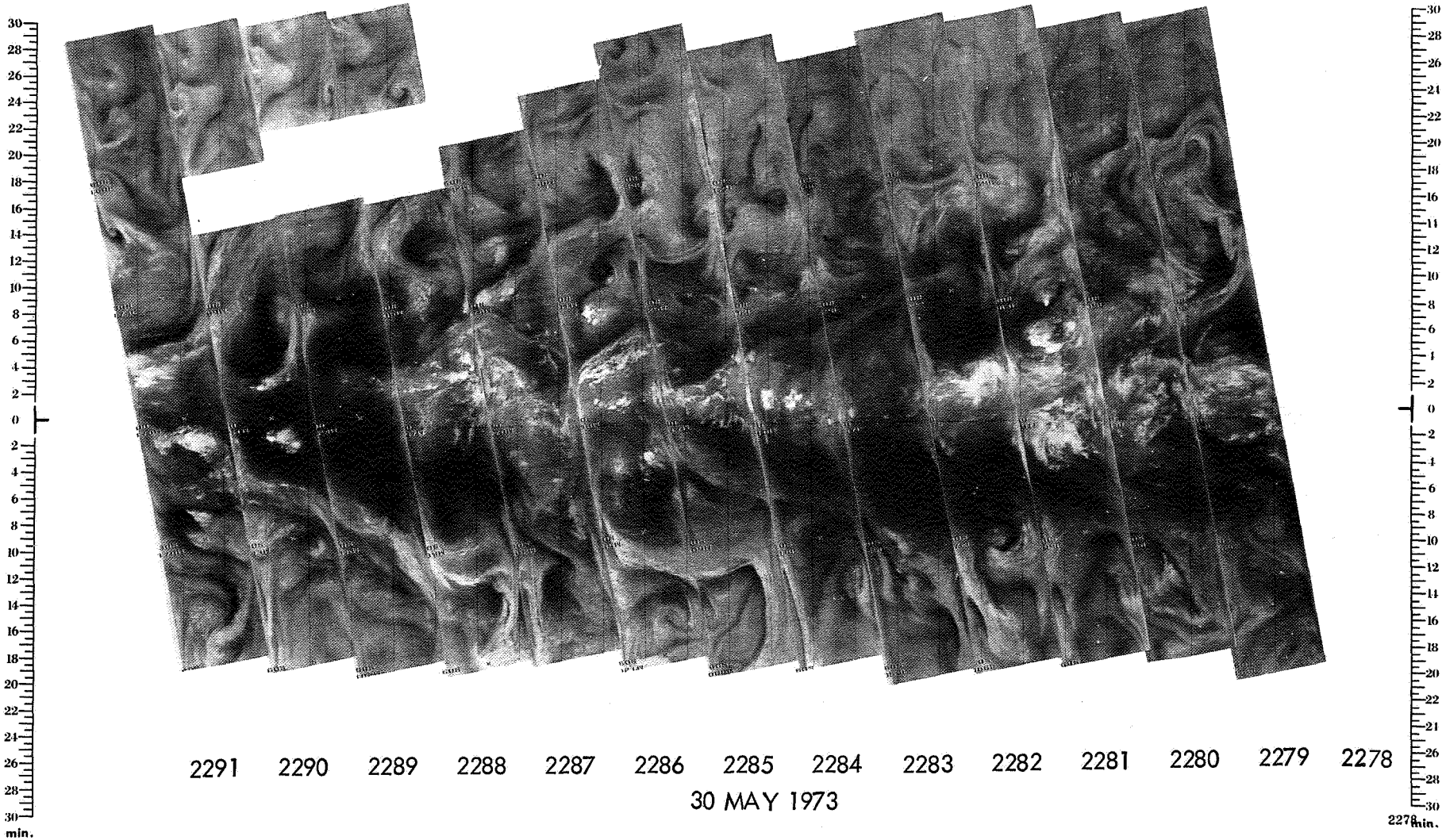
2291 2290 2289 2288 2287 2286 2285 2284 2283 2282 2281 2280 2279 2278

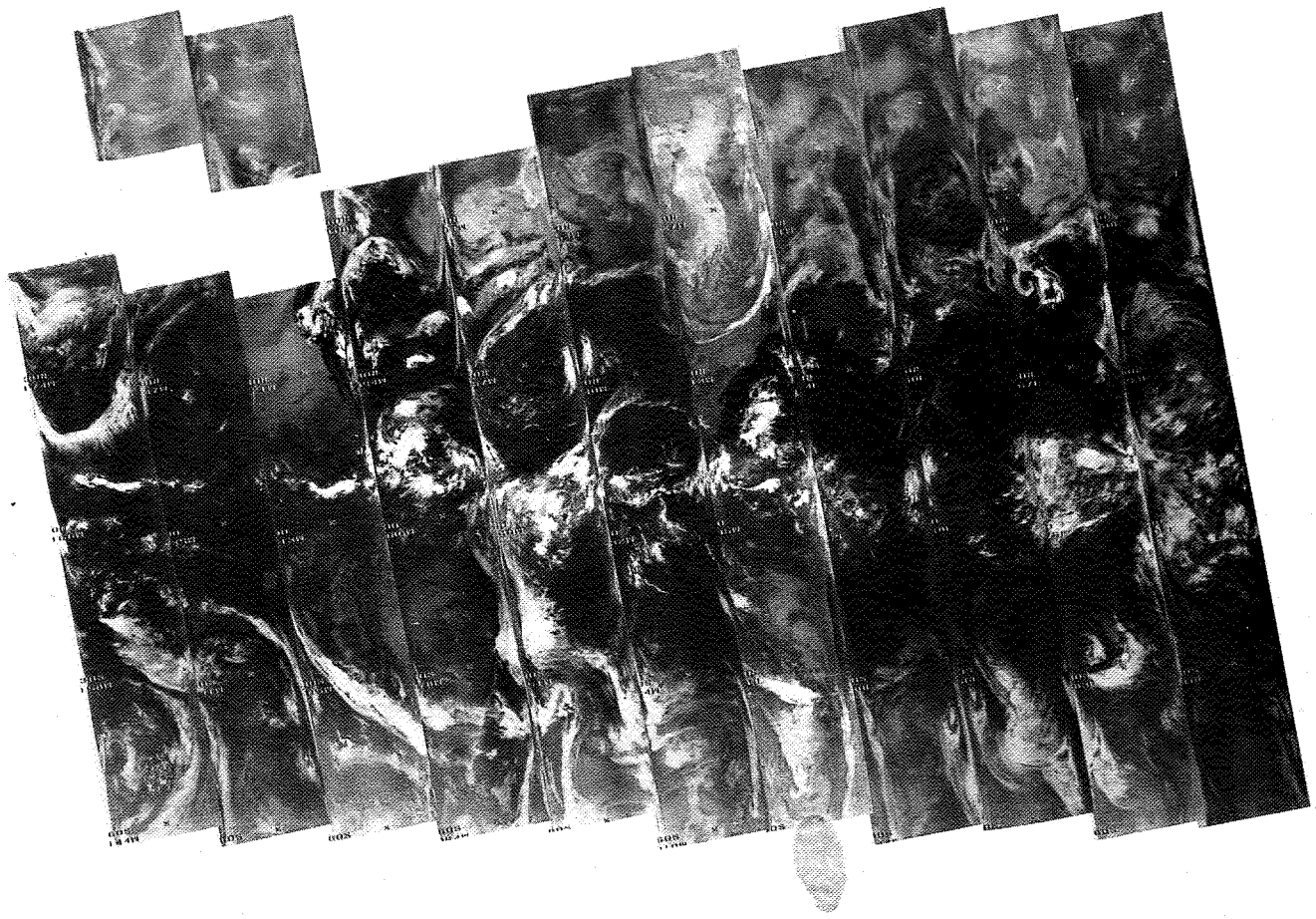
30 MAY 1973

11.5 μm

min.

in.


2291 2290 2289 2288 2287 2286 2285 2284 2283 2282 2281 2280 2279 2278
30 MAY 1973
6.7 μm
min.
2278 min.

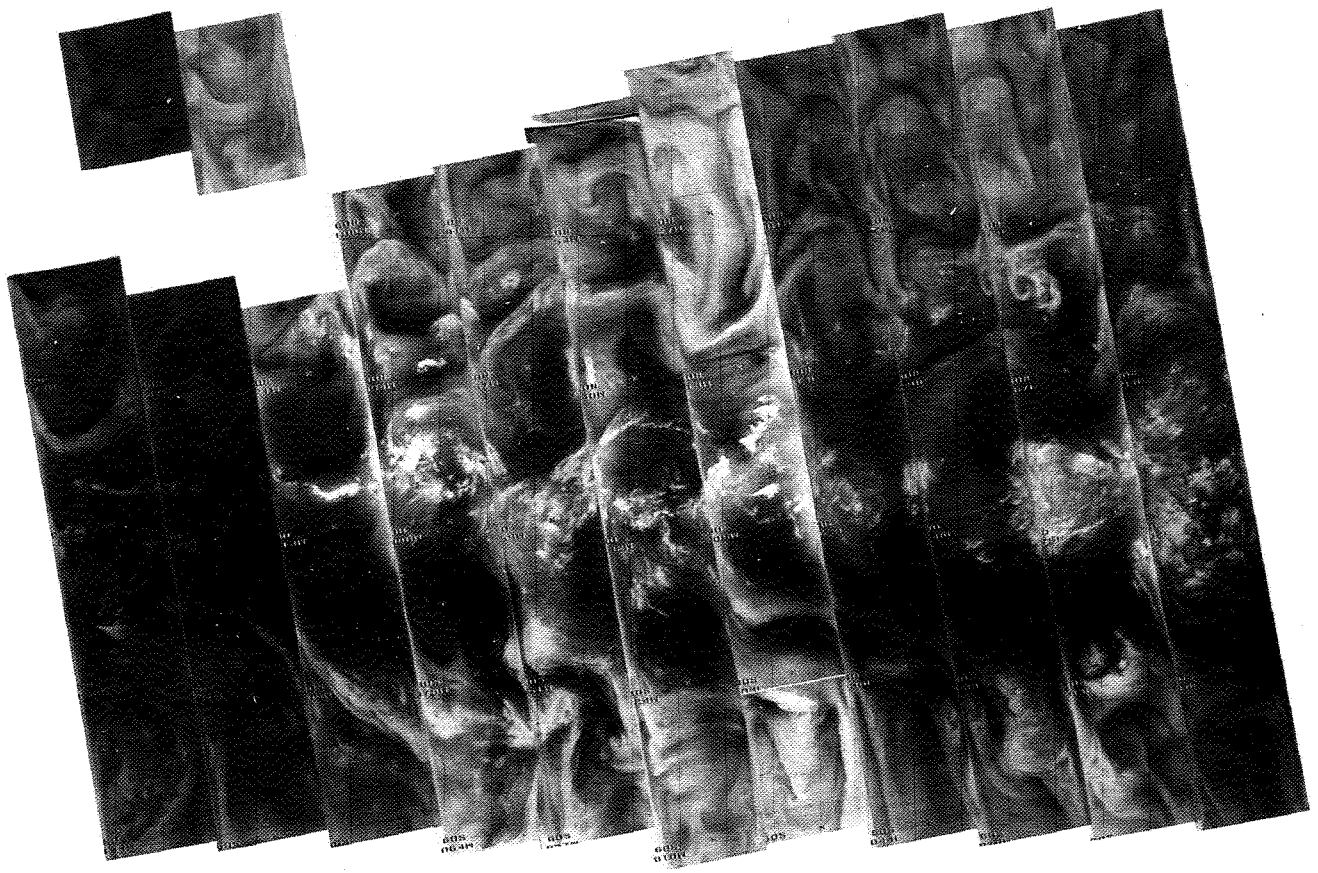


2304 2303 2302 2301 2300 2299 2298 2297 2296 2295 2294 2293 2292

31 MAY 1973

11.5 μm

min.



2304 2303 2302 2301 2300 2299 2298 2297 2296 2295 2294 2293 2292

31 MAY 1973

6.7 μm

SECTION 5

CORRECTIONS TO THE NIMBUS 5 USER'S GUIDE

This section presents all corrections or additions to The Nimbus 5 User's Guide which now are known to be necessary. If additional corrections are required, they will appear in a subsequent catalog. All previous corrections will be carried forward cumulatively into each new catalog.

5.1 THIR Corrections to the User's Guide

Table 5-1
(First presented in Volume 1)
This table replaces Table 2-3 (page 31) in The Nimbus 5 User's Guide.

Table 2-3

THIR OUTPUT VOLTAGES VERSUS EQUIVALENT BLACKBODY TEMPERATURES AT DIFFERENT BOLOMETER TEMPERATURES FOR THE 11.5μ m CHANNEL

		Bolometer Temperature (°C)				
		0	10	20	30	40
Blackbody Temperature (°K)	0*	-0.405	-0.407	-0.413	-0.421	-0.425
	180	-0.618	-0.617	-0.617	-0.617	-0.606
	190	-0.711	-0.709	-0.706	-0.702	-0.685
	200	-0.829	-0.825	-0.820	-0.811	-0.786
	210	-0.976	-0.970	-0.961	-0.946	-0.911
	220	-1.153	-1.144	-1.130	-1.109	-1.062
	230	-1.363	-1.351	-1.332	-1.302	-1.240
	240	-1.606	-1.591	-1.565	-1.526	-1.448
	250	-1.886	-1.867	-1.834	-1.783	-1.686
	260	-2.202	-2.178	-2.137	-2.074	-1.955
	270	-2.555	-2.526	-2.476	-2.399	-2.256
	280	-2.946	-2.911	-2.851	-2.759	-2.589
	290	-3.375	-3.334	-3.262	-3.153	-2.954
	300	-3.841	-3.793	-3.709	-3.582	-3.352
	310	-4.345	-4.289	-4.192	-4.045	-3.781
	320	-4.886	-4.822	-4.711	-4.543	-4.241
	330	-5.463	-5.391	-5.264	-5.074	-4.733

*Space level

Table 5-2
(First presented in Volume 1)
This table replaces Table 2-4 (page 32) in The Nimbus 5 User's Guide.

Table 2-4

THIR OUTPUT VOLTAGES VERSUS EQUIVALENT BLACKBODY TEMPERATURES AT DIFFERENT BOLOMETER TEMPERATURES FOR THE 6.7μ m CHANNEL

		Bolometer Temp. (°C)				
		0	10	20	30	40
Blackbody Temperature (°K)	0*	-0.507	-0.518	-0.532	-0.556	-0.576
	180	-0.607	-0.618	-0.632	-0.655	-0.674
	185	-0.644	-0.654	-0.669	-0.692	-0.710
	190	-0.692	-0.702	-0.716	-0.739	-0.756
	195	-0.752	-0.762	-0.776	-0.798	-0.814
	200	-0.827	-0.838	-0.851	-0.873	-0.888
	205	-0.921	-0.931	-0.944	-0.966	-0.978
	210	-1.035	-1.045	-1.058	-1.078	-1.089
	215	-1.172	-1.182	-1.195	-1.215	-1.223
	220	-1.337	-1.347	-1.359	-1.379	-1.383
	225	-1.533	-1.543	-1.554	-1.573	-1.573
	230	-1.764	-1.774	-1.784	-1.801	-1.797
	235	-2.033	-2.043	-2.052	-2.068	-2.059
	240	-2.350	-2.355	-2.363	-2.378	-2.362
	245	-2.704	-2.714	-2.721	-2.734	-2.711
	250	-3.115	-3.125	-3.131	-3.142	-3.111
	255	-3.582	-3.592	-3.597	-3.605	-3.565
	260	-4.110	-4.119	-4.122	-4.127	-4.077
	265	-4.704	-4.714	-4.715	-4.717	-4.656
	270	-5.367	-5.378	-5.376	-5.375	-5.300

*Space level

5.2 SCMR Corrections to the User's Guide

There are no SCMR corrections to the User's Guide.

5.3 ESMR Corrections to the User's Guide (New)

The following information replaces the next to the last paragraph on page 103 (Section 4, 4.5) of The Nimbus 5 User's Guide.

ESMR grid print maps of calibrated brightness temperatures are available from NSSDC in three different map projections. There are: (1) Polar stereographic, (2)

Mercator, and (3) Horizontal stereographic (Bull's-eye). Program options permit contouring of the grid print maps, printing of map titles and using fewer than the full 78 beam positions.

For each map requested, the following information is needed:

- Satellite and sensor
  Nimbus 5 ESMR

- Map type
  1. Polar stereographic
  2. Mercator
  3. Horizontal stereographic (Bull's-eye)

- Map scale
  Scale of map in millions

- Geographic area
  1. For a Polar stereographic map specify —
     latitude of map perimeter, and orientation of 0° meridian line. The standard position for the 0° meridian on a northern hemisphere map is 10° clockwise below a left-right horizontal line through the map's pole.

     On a southern hemisphere map, 0° meridian is 10° counterclockwise below a left-right horizontal line through the map's pole. For other orientations of the 0° meridian, the user must specify, preferably with a sketch, the orientation desired.

  2. For a Mercator map specify —
     latitude of upper and lower edges of map, and longitudes of left and right edges of map. Longitudes are measured west from Greenwich (0°).

  3. For a Horizontal stereographic (Bull's-eye) map specify —
     latitude and longitude (west from Greenwich) of map center, pseudo co-latitude of map perimeter (number of degrees of latitude from map center), and azimuth of 0° longitude line. If not specified, the azimuth will be located as it is for the Polar stereographic map.

- Calendar date of data requested

- Data orbit number(s)

- Beginning and end time (GMT) of the date for each map requested. These times are derived from information in Table 2-2 of each Nimbus 5 Data Catalog.

Optional specifications for each map are the following:

- ESMR beam parameters
  The user can specify, or limit, the range of beam positions used to produce each map. If no specifications are made, beam positions 1 through 78 are used.

- Map title
  For each map, the user may specify a title containing up to 70 characters.

- Contouring
  Normally, maps are printed without contours. To obtain contoured maps, the user must specify a contour base (or lower temperature limit e. g., 130°K) and a contouring interval (e. g., contour every 10°K). The contour program fills in the first contour interval above the contour base with the letter "A", the next interval is blank, the next is filled in with the letter "B", etc.

(The following was first presented in Volume 2.)

Table 4-4 of The Nimbus 5 User's Guide will not be supplied. Table 5-3, below, is to be used in its place.

As stated in The Nimbus 5 Data Catalog, vol. 1, the antenna properties changed after final calibration and rendered those numbers useless. The cause of the gross variations in antenna properties which were observed soon after launch has been determined to be a cross-polarized grating lobe. This finding has been confirmed through measurements on the engineering model and on the proto/flight model of the ESMR, and through theoretical calculations. The problem does not exist for the near-nadir beam positions, so those positions are unaffected. A quantitative discussion of this problem is included in the report of the Nimbus 5 ESMR Anomaly Review Committee.

An empirical calibration has been developed which removes the effect of the lobe structure and antenna loss, which vary with position, and roughly corrects for angular variations in viewing geometry. In this calibration scheme the antenna loss ratio is assumed to be 1.56 for all temperatures and beam positions, and a linear correction is applied to the data. The correction is given by:

$$T_i' = A_i T_i + B_i$$

where T_i' is the corrected brightness temperature for the i'th beam position and T_i is the brightness temperature calculated with the assumption of a constant antenna loss. A_i and B_i are empirically derived constants given in Table 5-3.

Table 5-3

CONSTANTS FOR LINEAR CORRECTION OF BRIGHTNESS TEMPERATURES CORRESPONDING TO ESMR BEAM POSITIONS

Beam Position	A	B(°K)
1	1.058	4
2	1.027	10
3	.990	16
4	.980	14
5	.963	17
6	.987	15
7	.970	17
8	.961	19
9	.969	18
10	.980	16
11	.980	17
12	1.018	10
13	.999	12
14	.989	13
15	.975	15
16	.974	15
17	.994	10
18	1.026	8
19	1.038	5
20	1.018	13
21	1.034	13
22	1.099	4
23	1.082	9
24	1.048	8
25	.986	12
26	.960	10
27	.941	11
28	.947	10
29	.937	11
30	.942	10
31	.963	6
32	1.003	-3
33	1.002	-3
34	.976	1
35	.988	-1
36	1.004	0
37-42	1.000	0
43	1.002	-3
44	.962	4
45	.960	4
46	.980	2

Table 5-3 (Continued)

Beam Position	A	B(°K)
47	.966	4
48	.966	6
49	.948	10
50	.949	10
51	.934	12
52	.945	13
53	.988	11
54	1.019	11
55	1.041	11
56	1.049	14
57	1.042	15
58	1.019	16
59	1.015	15
60	1.012	12
61	.993	13
62	.976	15
63	.998	12
64	.983	14
65	.998	14
66	.970	19
67	.982	18
68	.980	19
69	.955	24
70	.974	22
71	.941	26
72	.969	22
73	.949	30
74	.967	22
75	.956	27
76	.959	28
77	.969	26
78	1.030	13

5.4 ITPR Corrections to the User's Guide

The following tables replace Table 5-3 of The Nimbus 5 User's Guide.

Table 5-4
(First presented in volume 1)

ITPR Calibration Constants for the
Period 12/12/72 - 2/6/73

$R_s = a_0 + a_1 V$

R_s = radiance of the scene (mw/m^2 ster cm^{-1})

V = digital counts

Channel	a_0*	a_1
1	1.0495	-0.001773
2	141.78	-0.1813
3	166.93	-0.2046
4	173.02	-0.2065
5	174.02	-0.1940
6	174.99	-0.1977
7	170.18	-0.1995

*The calibration constant a_0 now includes the radiance of the chopper reference blackbody.

Table 5-5
(First presented in volume 2)

ITPR Calibration Constants for the
Period 2/6/73 - 3/31/73

$R_s = a_0 + a_1 V$

R_s = radiance of the scene (mw/m^2 ster cm^{-1})

V = digital counts

Channel	a_0*	a_1
1	1.061	-0.001782
2	141.775	-0.1801
3	166.840	-0.2037
4	172.974	-0.2054
5	174.034	-0.1931
6	175.040	-0.1963
7	170.288	-0.1988

*The calibration constant a_0 now includes the radiance of the chopper reference blackbody.

Table 5-6

ITPR Calibration Constants for the Period
4/1/73 - 5/31/73

$R_s = a_0 + a_1 V$

R_s = radiance of the scene (mw/m^2 ster cm^{-1})

V = digital counts

Channel	a_0*	a_1
1	1.056	-0.001783
2	141.6	-0.1815
3	166.8	-0.2057
4	173.0	-0.2068
5	174.0	-0.1946
6	174.9	-0.1976
7	170.1	-0.1987

*The calibration constant a_0 now includes the radiance of the chopper reference blackbody.

The following are changes to the ITPR verbiage in Section 5 of The Nimbus 5 User's Guide: (First presented in Volume 2)

- The table, Nimbus 5 Compacted Data Format, at the bottom of page 125 should read:

Word	Format	Description
1	I	GMT (seconds)
2	Spec 1	Julian Day and Year
3 - 162	Spec 2 (F1, F3)	Calibrated IR Data
163 - 182	F1	Latitude
183 - 202	F1	Longitude
203 - 222	F1	Zenith
223	I	Grid Type (0 = Nadir) (1, 2, or 3 = Scan)
224 - 225	-	Zero Fill

- On page 126 in the paragraph describing Spec 2, the last two lines of that paragraph should read:

  ". . . 4-word pattern will be repeated thru word 162, resulting in 40 sets of IR measurements."

- The next paragraph (on page 126, after description of Spec 2) should read:

  "Each data record will contain 5 major frames of data (225 24-bit words for each major frame) with a total of 1125 24-bit words, or 450 60-bit words. Because major frames will contain either 34, 36 or 40 earth views for each channel, there will be zero fill in the IR data words when 34 or 36 views are present, and the corresponding latitudes and longitudes will be fictitious. This applies also to data samples which occur during retrace. Zero fill will be used to produce the constant-length record when the number of major frames in a day is not a multiple of 5."

- In the next paragraph the following changes should be made:

  Line 1: ". . . with a density of 556 6-bit bytes . . ."
  should read: ". . . with a density of 800 6-bit bytes . . ."

  Line 3: ". . . per day at 320 major frames . . . about 640 records"
  should read: ". . . per day at 400 major frames . . . about 960 records"

  Line 4: ". . . will contain about 5 days . . ."
  should read: ". . . will contain about 4 days . . ."

5.5 SCR Corrections to the User's Guide

The following information supplements the SCR information in the User's Guide and has been derived from post-launch information.

The filters of the A and B channels have minor leaks at short wavelengths. Corrections for these leaks are made using the radiance measured by channel C4 (11.5 μm window channel) in the equation,

$$R_i' = R_i(1 + \gamma_i) - a_i \gamma_i C_4,$$

where R_i is the measured channel i Radiance and R_i' is the corrected radiance. Table 5-7 gives values of γ and $a\gamma$ for the A channels and channel B4. Corrections are of order 1-2 radiance units (mw/m^2 ster cm^{-1}) for the A channels. This is small compared with typical measured radiances of 80 units, but still 5-10 times larger than the rms noise. The correction to B4 is normally about 5 radiance units.

The B difference channels are not affected by leaks since the differencing operation causes the leaks to cancel exactly. The equation

$$R_{ij} = R_i + (R_i - R_j)\,\beta_{ij},$$

where R_{ij} is the calculated channel B_{ij} radiance and R_i is the measured channel Bi radiance, is used to derive the B difference channel radiances (B12, B23, and B34)

Table 5-7

Correction Coefficients γ and $a\gamma$ for the SCR Temperature Sounding Channels

Channel	γ	$a\gamma$
A1	.0305	.015
A2	.0235	.0105
A3	.0146	.0057
A4	.0595	.025
B4	.153	.0165

Table 5-8

SCR B Difference Channel Coefficients β

Channel	β
B12	9.50
B23	10.05
B34	4.83

from the measured B channel radiances (B1, B2, B3, and B4). Table 5-8 gives the coefficients β_{ij}.

Figure 5-1 gives the experimenter's current best estimates of the weighting functions of the A channels and B4, when corrected as above, and the B difference channels. These channels measure emission from carbon dioxide in the ν_2 band near 15 μm. The weighting functions were derived for a climatological mean temperature profile and, to a good approximation, are independent of temperature profile for the range of temperature which occurs in the atmosphere. These weighting functions are a compromise between theoretical computations using spectral line parameters together with measured filter transmission profiles, and pre-launch test results for the flight instrument. This method is similar to that used for the Nimbus 4 SCR and was described in more detail by Barnett et al (1972).

5.6 NEMS Corrections to the User's Guide

There are no NEMS corrections to the User's Guide.

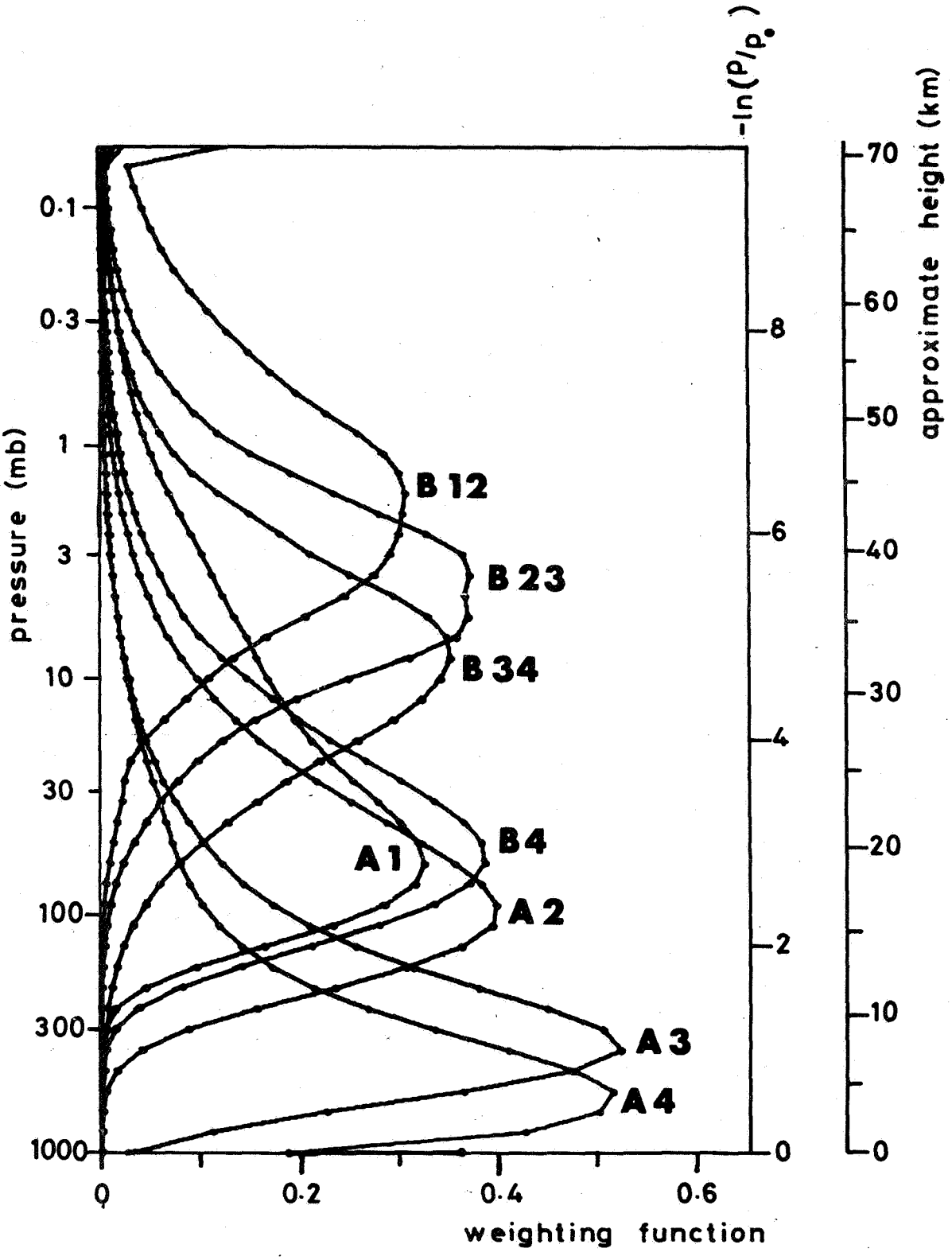
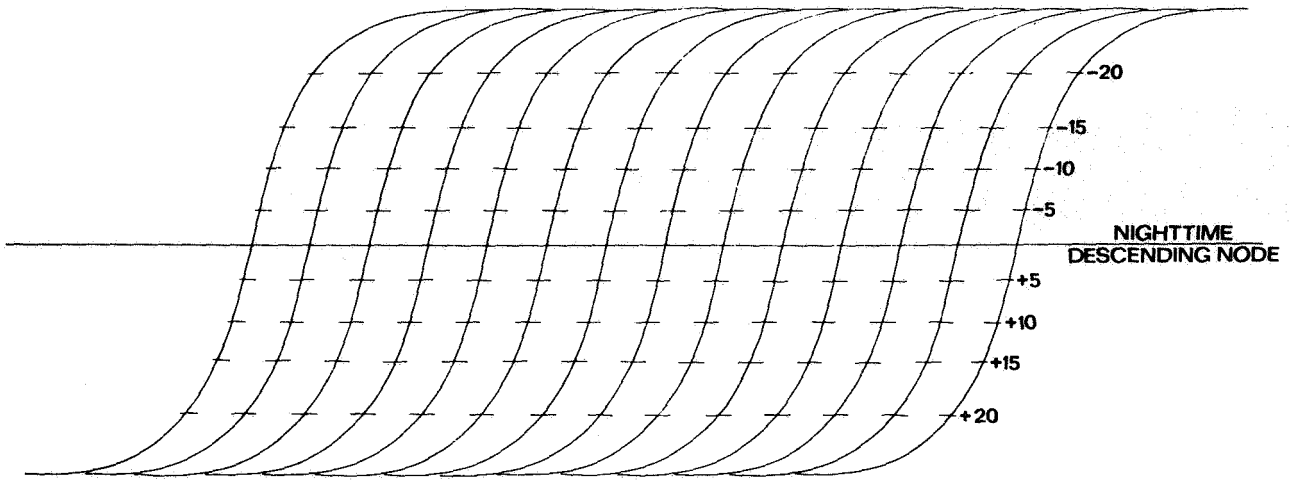
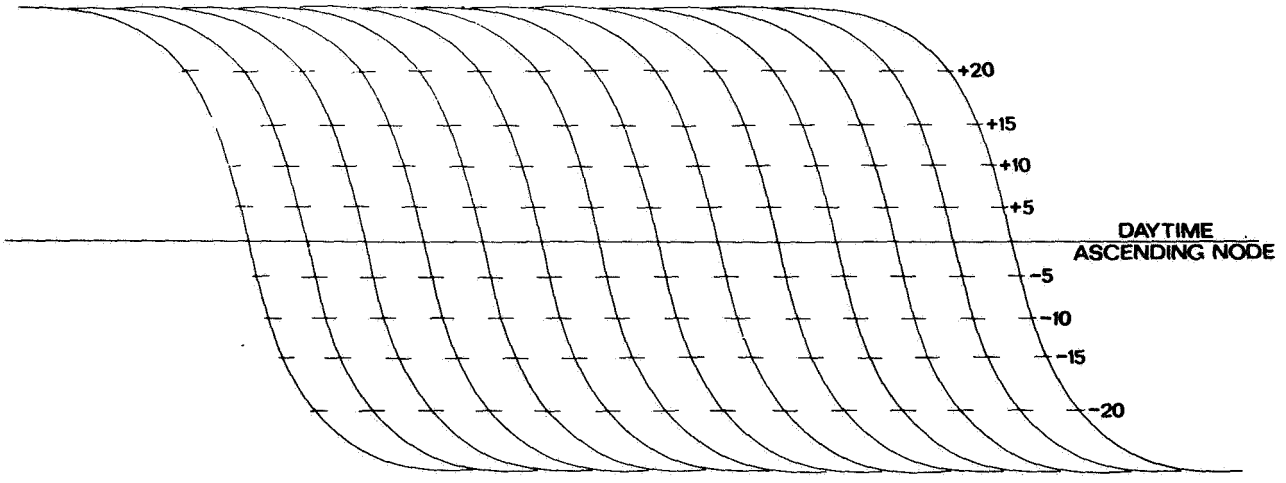


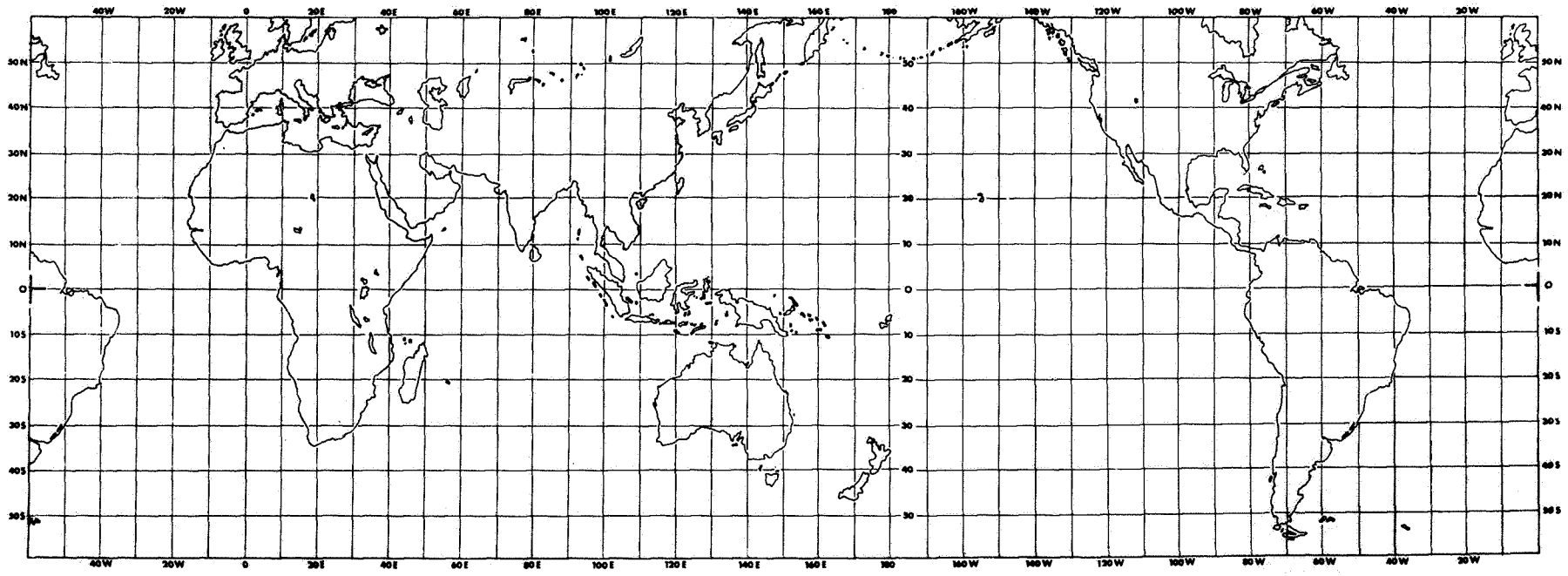
Figure 5-1. Weighting Functions of the Temperature Sounding Channels of the Nimbus 5 SCR. The height scale is approximate. The abscissa is a weighting function on an arbitrary scale.



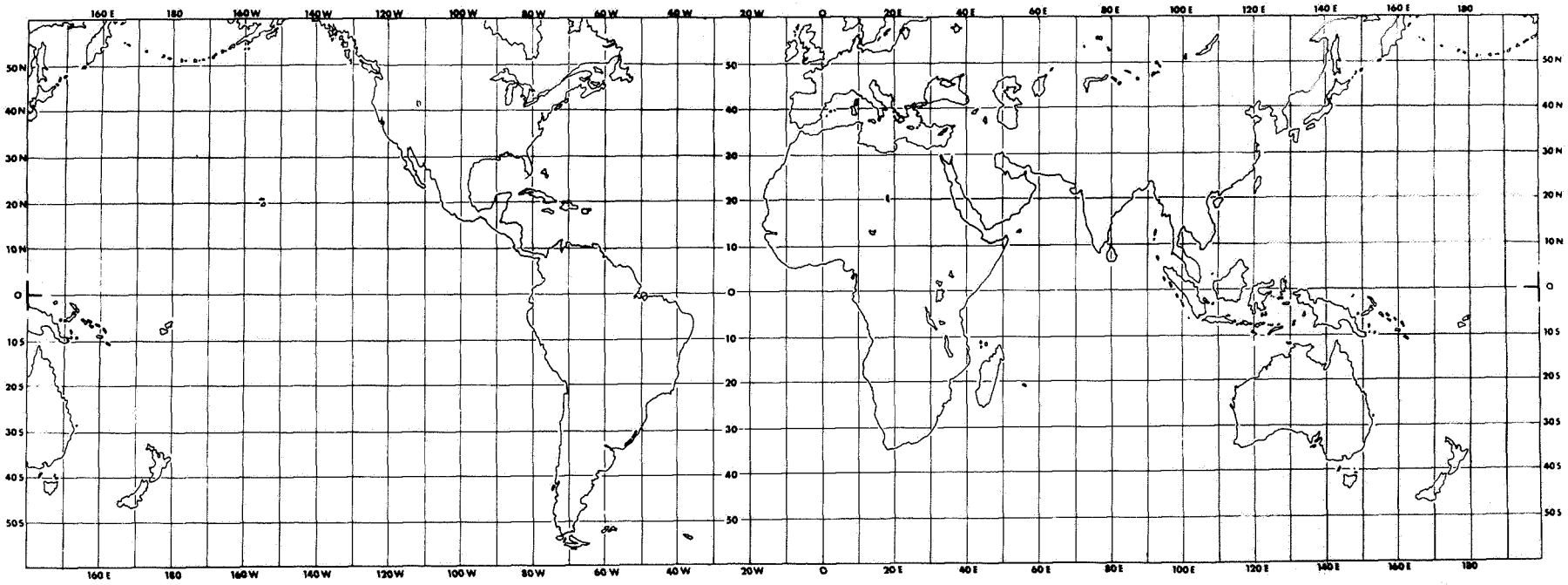
NIMBUS 4 SUBSATELLITE TRACKS OVERLAY



NIMBUS 4 SUBSATELLITE TRACKS OVERLAY



Location Guide
Average Scale for Nimbus 4
THIR Nighttime Montages



Location Guide
Average Scale for Nimbus
THIR Daytime Montages